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FILE 'HCAPLUS' ENTERED AT 13:07:17 ON 07 JUL 2005  
E GUO Z/AU  
L1 327 S E3,E10  
E GUO ZI/AU  
L2 28 S E3,E8  
L3 117 S E31,E32  
E DUNPHY W/AU  
L4 67 S E4-E8  
L5 1 S (US20040018603# OR US6593110 OR US20020086392#)/PN OR (US2003  
E CDC25  
L6 1217 S E3  
L7 1995 S CDC25?  
L8 14 S L1-L5 AND L6,L7  
L9 1 S L8 AND L5  
L10 1 S L6,L7 AND 517  
L11 3 S L6,L7 AND SQ(S)TQ  
L12 5 S L6,L7 AND CARBOX?(S)TERMIN?(S)KINASE  
L13 2 S L6,L7 AND CTK  
L14 1 S L6,L7 AND AMINO(L)TERMIN?(L)FORKHEAD  
L15 12 S L5,L6 AND 58  
L16 2 S L5,L6 AND 58() (KD OR KDALTON OR KILODALTON OR KILO DALTON)  
L17 1 S L5,L6 AND 58(L) (MW OR MOL MASS OR MOL WEIGHT)  
L18 9 S L9-L14,L16,L17  
L19 1 S L5,L6 AND 58 KDA  
L20 10 S L18,L19  
L21 0 S L5,L6 AND (58000 OR 58 000)  
L22 13 S L8 NOT L20

FILE 'HCAPLUS' ENTERED AT 13:15:14 ON 07 JUL 2005

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L20 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:384441 HCAPLUS  
 DN 140:403912  
 ED Entered STN: 13 May 2004  
 TI Structural and functional analysis of regulation of Chk2 kinase by Wip1 phosphatase  
 AU Xu, Xiaozhou  
 CS Dep. Gastroenterol. Surgery, Grad. Sch. Med., Kobe Univ., Kobe, 650-0017, Japan  
 SO Kobe Daigaku Igakubu Kiyo (2004), 64(3,4), 31-39  
 CODEN: KDIKAX; ISSN: 0075-6431  
 PB Kobe Daigaku Igakubu  
 DT Journal  
 LA Japanese  
 CC 13-1 (Mammalian Biochemistry)  
 Section cross-reference(s): 7  
 AB The Chk2 tumor suppressor protein is an evolutionarily conserved nuclear protein kinase that plays a crucial role in the response to DNA damage. Following DNA damage, Chk2 kinase is activated by phosphorylation of threonine 68 by the protein kinase ATM (ataxia-telangiectasia-mutated). Activated Chk2 then phosphorylates its downstream effectors, including the tumor suppressor p53, BRCA1 and PML, as well as the Cdc25 phosphatases. I showed that Chk2 assocs. with the oncogenic protein Wip1 (PPM1D), and dephosphorylates threonine 68 on phosphorylated Chk2. To investigate mechanisms of Chk2 inactivation by Wip1, I generated a series of truncated protein of Chk2. Chk2 SQ/TQ domain, including threonine 68, is necessary for Wip1 binding with Chk2 in vitro and in vivo. Thus, it is indicated that Wip1 phosphatase inhibits Chk2 activity by binding SQ/TQ domain of Chk2.  
 ST Chk2 kinase Wip1 phosphatase DNA injury  
 IT DNA  
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (damage; structural and functional anal. of regulation of Chk2 kinase by Wip1 phosphatase)  
 IT DNA repair  
 Human  
 Phosphorylation, biological  
 (structural and functional anal. of regulation of Chk2 kinase by Wip1 phosphatase)  
 IT 421595-36-0, Gene PPM1D protein phosphatase  
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (structural and functional anal. of regulation of Chk2 kinase by Wip1 phosphatase)  
 IT 244634-79-5, Chk2 protein kinase  
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)  
 (structural and functional anal. of regulation of Chk2 kinase by Wip1 phosphatase)  
 L20 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:384305 HCAPLUS  
 DN 141:19281  
 ED Entered STN: 12 May 2004  
 TI TAF1 activates transcription by phosphorylation of serine 33 in histone H2B  
 AU Maile, Tobias; Kwoczynski, Simona; Katzenberger, Rebeccah J.; Wassarman, David A.; Sauer, Frank  
 CS Department of Biochemistry, University of California-Riverside, Riverside,

CA, 95121, USA  
 SO Science (Washington, DC, United States) (2004), 304(5673), 1010-1014  
 CODEN: SCIEAS; ISSN: 0036-8075  
 PB American Association for the Advancement of Science  
 DT Journal  
 LA English  
 CC 6-1 (General Biochemistry)  
 Section cross-reference(s): 3  
 AB Dynamic changes in chromatin structure, induced by posttranslational modification of histones, play a fundamental role in regulating eukaryotic transcription. Here it was reported that histone H2B is phosphorylated at evolutionarily conserved Ser33 (H2B-S33) by the carboxyl-terminal kinase domain (CTK) of the Drosophila TFIID subunit TAF1. Phosphorylation of H2B-S33 at the promoter of the cell cycle regulatory gene string and the segmentation gene giant coincides with transcriptional activation. Elimination of TAF1 CTK activity in Drosophila cells and embryos reduces transcriptional activation and phosphorylation of H2B-S33. These data reveal that H2B-S33 is a physiol. substrate for the TAF1 CTK and that H2B-S33 phosphorylation is essential for transcriptional activation events that promote cell cycle progression and development.  
 ST histone H2B serine phosphorylation TAF1 transcription activation  
 IT Phosphorylation, biological  
     (H2B-S33, TAF1 CTK mediated; TAF1 activates transcription by phosphorylation of serine 33 in histone H2B)  
 IT Histones  
     RL: BSU (Biological study, unclassified); BIOL (Biological study)  
     (H2B; TAF1 activates transcription by phosphorylation of serine 33 in histone H2B)  
 IT Transcription factors  
     RL: BSU (Biological study, unclassified); BIOL (Biological study)  
     (TAF1 (TATA box-binding protein-associated factor 1); TAF1 activates transcription by phosphorylation of serine 33 in histone H2B)  
 IT Drosophila  
     (TAF1 activates transcription by phosphorylation of serine 33 in histone H2B)  
 IT Transcriptional regulation  
     (activation, stg/cdc25, effect of H2B-S33 phosphorylation on; TAF1 activates transcription by phosphorylation of serine 33 in histone H2B)  
 IT Protein motifs  
     (carboxyl-terminal kinase domain, TAF1; TAF1 activates transcription by phosphorylation of serine 33 in histone H2B)  
 IT Gene, animal  
     RL: BSU (Biological study, unclassified); BIOL (Biological study)  
     (stg/cdc25; TAF1 activates transcription by phosphorylation of serine 33 in histone H2B)  
 IT 56-45-1, Serine, biological studies  
     RL: BSU (Biological study, unclassified); BIOL (Biological study)  
     (Ser33; TAF1 activates transcription by phosphorylation of serine 33 in histone H2B)  
 RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 RE  
 (1) Apone, L; Genes Dev 1996, V10, P2368 HCPLUS  
 (2) Beisel, C; Nature 2002, V419, P857 HCPLUS  
 (3) Chen, B; Curr Biol 2002, V12, PR620 HCPLUS  
 (4) Cheung, W; Cell 2003, V113, P507 HCPLUS  
 (5) Dikstein, R; Cell 1996, V84, P781 HCPLUS  
 (6) Dunphy, E; Mol Cell Biol 2001, V20, P1134

- (7) Elgin, S; Biochemistry 1979, V18, P5679 HCAPLUS  
 (8) Fischle, W; Nature 2003, V425, P475 HCAPLUS  
 (9) Florence, B; Front Biosci 2001, V6, PD1008 HCAPLUS  
 (10) Georgel, P; EMBO J 1997, V16, P4717 HCAPLUS  
 (11) Goll, M; Genes Dev 2002, V16, P1739 HCAPLUS  
 (12) Hamiche, A; Proc Natl Acad Sci USA 2001, V98, P14316 HCAPLUS  
 (13) Isenberg, I; Annu Rev Biochem 1979, V48, P159 HCAPLUS  
 (14) Jacobson, R; Science 2000, V288, P1422 HCAPLUS  
 (15) Lee, M; Mol Biol Cell 1992, V3, P73 HCAPLUS  
 (16) Lemon, B; Genes Dev 2000, V14, P2551 HCAPLUS  
 (17) Luger, K; Curr Opin Struct Biol 1998, V8, P33 HCAPLUS  
 (18) Luger, K; Nature 1997, V389, P251 HCAPLUS  
 (19) Martin, J; Mol Cell Biol 1999, V19, P5548 HCAPLUS  
 (20) Mizzen, C; Cell 1996, V87, P1261 HCAPLUS  
 (21) Orphanides, G; Cell 2002, V108, P439 HCAPLUS  
 (22) Pham, A; Science 2000, V289, P2357 HCAPLUS  
 (23) Pile, L; Mol Cell Biol 2002, V22, P4965 HCAPLUS  
 (24) Recht, J; EMBO J 1999, V18, P229 HCAPLUS  
 (25) Rivera-Pomar, R; Trends Genet 1996, V12, P478 HCAPLUS  
 (26) Um, M; Mol Cell Biol 2002, V21, P2435  
 (27) Wassarman, D; J Cell Sci 2001, V114, P2895 HCAPLUS  
 (28) Zheng, L; FEBS Lett 2002, V513, P124

L20 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2002:51660 HCAPLUS  
 DN 136:98853  
 ED Entered STN: 18 Jan 2002  
 TI Proteins and nucleic acids associated with aging and their detection in identification of tissues undergoing senescence and of senescence modulators  
 IN Burmer, Glenna; Pritchard, David; Brown, Joseph P.; Demas, Vasiliki  
 PA Lifespan Biosciences, Inc., USA  
 SO PCT Int. Appl., 70 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM C12Q001-34  
 ICS C12Q001-68; A61K031-47  
 CC 9-16 (Biochemical Methods)  
 Section cross-reference(s): 1, 3, 6  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002004662	A1	20020117	WO 2001-US21361	20010703
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	AU 2001073208	A5	20020121	AU 2001-73208	20010703
	US 2002098495	A1	20020725	US 2001-898730	20010703
PRAI	US 2000-216470P	P	20000706		
	WO 2001-US21361	W	20010703		

CLASS  
 PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

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WO 2002004662 ICM C12Q001-34  
                   ICS C12Q001-68; A61K031-47  
 WO 2002004662 ECLA C12Q001/68M  
 US 2002098495 NCL 435/006.000; 435/007.100; 435/007.200

AB This invention relates to the discovery of nucleic acids and proteins associated with the aging processes, such as cell proliferation and senescence. The identification of these aging-associated nucleic acids and proteins have diagnostic uses in detecting the aging status of a cell population as well as applications for gene therapy and the delaying of the aging process.

ST protein aging nucleic acid; senescence tissue diagnosis protein nucleic acid; modulator senescence cell proliferation protein nucleic acid; gene therapy aging protein nucleic acid

IT Transducins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
       (( $\beta$ ) like 1 and  $\alpha$ -chain GNAT1 mRNA, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Transport proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
       (ABC (ATP-binding cassette) transporters, TAP-like, human homolog of rat TAPL mRNA for; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
       (AF1q, mRNA, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
       (AGF3-like, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
       (AKAP (A-kinase anchor protein), down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
       (AP-4 adaptor complex,  $\beta$ 4 subunit mRNA, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(ARL2 (ADP-ribosylation factor-like protein 2), down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (ATP5A, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Mitochondria  
 (ATPase coupling factor 6 subunit, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Myosins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (B, heavy chain, nonmuscle, MYH10, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (BAP2- $\alpha$ , mRNA, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Cell adhesion molecules  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (CALL, neural, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Transcription factors  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (CBF (core-binding factor), homolog of mouse, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (CD18-tumor necrosis factor receptor 2-related, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (CD1D, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological

study); USES (Uses)  
 (CDC25, CDC25Hu2, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (CGI-27, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (CLP, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (COX17, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (CRABP-II (cellular retinoic acid-binding protein II), down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (DBI, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (DEAD-box p72, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (DNA mismatch repair, MSH2, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (DNA-binding protein SMBP2, mRNA, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (DNA-binding, mbp-1, down-regulated; proteins and nucleic acids associated

with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (DR-nm23, mRNA, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (DRES9, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Duo, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Elongation factors (protein formation)  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (EF-1 $\beta$ , up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (ELL, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (FABP (fatty acid-binding protein), up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (FIP-1, mRNA, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (G6PD, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT GABA receptors  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (GABA $A$ ,  $\alpha$  2 subunit, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

- IT GTPase-activating protein  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (GAPIII, human homolog of mouse, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Transcription factors  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (GATA-2, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (GBP (guanylate-binding protein), isoform II, mRNA, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (GNAT1 mRNA, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (GRP78 (glucose-regulated protein, 78 kDa), up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (H-pkl, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Histones  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (H3.1, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (HEK, receptor tyrosine kinase, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (HFREP-1, mRNA, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (HLA, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Heat-shock proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (HSP 27, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (HYA22, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Antigens  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Hakata, mRNA, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Has2, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Insulin-like growth factor-binding proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (IGFBP-5, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Myosins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (II, 20 kDa light chain (MLC-2) and cardiac ventricular light chain, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Annexins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (II, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (IRS-1 (insulin receptor substrate 1), down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Transcription factors  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic

use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Ikaros, LyF-1 homolog (hlk-1), down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 113943, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 115019, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 120291, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 131132, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 131799, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 142969, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 147318, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 151231, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues

- undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 153377, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 172326, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 172477, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 174234, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 177856, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 178543, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 182188, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 183487, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 183613, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 186205, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 194484, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 197077, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 20082, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 22750, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 230408, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 238346, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 243024, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

- (Image Clone ID 24781, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(Image Clone ID 252400, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(Image Clone ID 25530, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(Image Clone ID 277422, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(Image Clone ID 280244, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(Image Clone ID 28308, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(Image Clone ID 291633, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(Image Clone ID 293133, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(Image Clone ID 306032, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 320839, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

- IT Gene, animal  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(Image Clone ID 322334, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(Image Clone ID 323396, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(Image Clone ID 325674, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(Image Clone ID 360838, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(Image Clone ID 360931, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(Image Clone ID 362329, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(Image Clone ID 364111, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(Image Clone ID 364424, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

- (Image Clone ID 382093, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 38578, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 40965, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 41388, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 428541, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 428960, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 489983, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 503722, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 504351, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 51186, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 527027, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 530551, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 530813, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 531450, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 563318, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 611924, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 629587, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 647112, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Image Clone ID 725493, up-regulated; proteins and nucleic acids

associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 75268, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 755035, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 755266, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 757060, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 773422, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 82042, mRNA, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Image Clone ID 82627, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Int-6, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (KIAA00102, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

- IT Proteins  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(KIAA00148, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(KIAA00160, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(KIAA0038, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(KIAA0067, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(KIAA0076, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(KIAA0080, homolog of synaptotagmin XI, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(KIAA0086, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(KIAA0349, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(KIAA1226, homologous to Sus scrofa mRNA for soluble angiotensin-binding protein; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic

use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Kruppel-related zinc finger protein, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Ribosomal proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(L11, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Ribosomal proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(L21, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Ribosomal proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(L23a, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Ribosomal proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(L27, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Ribosomal proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(L30, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Ribosomal proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(L31, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Ribosomal proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(L32, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Ribosomal proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(L35, mRNA, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Ribosomal proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(L38, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Ribosomal proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (L44, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (LIM, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (MAP (microtubule-associated protein), MAP 1B (microtubule-associated protein

1B), down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Transcription factors

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (MBP-1 (histocompatibility antigen MHC-binding protein 1), down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Glycoproteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (MHC class I antigen-like, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (MHC class I-related, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (MYH10, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Transcription factors

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (Mad4 homolog, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (MyD118, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

- senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (NACA (nascent polypeptide-associated complex alpha), mRNA, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (NDP, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteinase-activated receptors  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (PAR-2, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (PDGFB, PDGFB, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (PIG10, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (PROS-27, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (PTD010, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (PTPRG, receptor-type protein tyrosine phosphatase  $\gamma$ , down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Pyst 1, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of

- senescence modulators)
- IT Ribosomal proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (RPS4Y, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Rab12, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Ras proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Ras-GRF2 (guanine nucleotide-releasing factor 2), down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Ribosomal proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (S10, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (S100  $\beta$  subunit gene, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Ribosomal proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (S12, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Ribosomal proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (S13, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Ribosomal proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (S24, mRNA, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Ribosomal proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (S3, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Splicing factors  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological

- study); USES (Uses)  
 (SF2 (splicing factor 2), mRNA, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Transcription factors  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (TAFII32, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (TAPL, human homolog of, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Phosphoproteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (TATA box-binding protein-associated, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (TAX-responsive element binding protein 107, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Transcription factors  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (TFIIE (transcription factor IIE),  $\alpha$ , up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Transcription factors  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (TFIIEH (transcription factor IIH), 52 kD subunit of, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Transforming growth factor receptors  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (TGF- $\beta$  receptor, type III, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (TGIF, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Tumor necrosis factors  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(TNFSF4, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (TSC-22-related, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (XP-C repair complementing (p58/HHR23B), up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Transcription factors

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (YB-1 (Y box-binding, 1), mRNA, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (ZNF131, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (activator of apoptosis harakiri, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (adaptins, β adaptin 1, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (adducin, γ subunit, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Cell

(aging status of; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

cDNA

mRNA

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(aging-associated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of

- IT senescence modulators)
- IT Polynucleotides
  - RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (antisense, for inhibiting cell senescence; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins
  - RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
    - (butyrophilin BTF5, mRNA, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal
  - RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
    - (c-fos, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Cadherins
  - RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
    - (cadherin 15, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, microbial
  - RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
    - (cdc10, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins
  - RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
    - (cellular ligand of annexin II (p11), up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins
  - RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
    - (claudins, claudin-10, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT CD36 (antigen)
  - RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
    - (clone 21, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Apolipoproteins
  - Endothelin receptors
    - RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
      - (down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

- IT Elongation factors (protein formation)  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (eEF-1 $\alpha$ , up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (erythroid membrane protein 4.1, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (ets domain protein ERF, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (exon 1,2,3,4, clone:RES4-24A, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (expression; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (fau, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Antisense DNA  
 Antisense RNA  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (for inhibiting cell senescence; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Transport proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (glutamate transporter, MEAAC2, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Interleukin 3 receptors  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (hIL-3Ra, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (hMAD-2, down-regulated; proteins and nucleic acids associated with aging

- and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (hevin-like, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Ribonucleoproteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (hnRNP (heterogeneous nuclear ribonucleoprotein), E1, mRNA, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Ribonucleoproteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (hnRNP (heterogeneous nuclear ribonucleoprotein), K, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (hnRNP C, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (homolog of synaptocalinin 1, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT *Mus musculus*  
 (human homolog of GTPase-activating protein GAPIII of, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT *Rattus norvegicus*  
 (human homolog of TAPL mRNA for TAP-like ABC transporter of; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Animal tissue culture  
 (in identification of senescence modulators; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Aging, animal  
 (inhibitors; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (l-plastins (leukocyte plastins), up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (lamins, B2, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (lysosome membrane protein II, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (mCAF1, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Chemokines  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (macrophage inflammatory protein 1, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (membrane, integral, dgcr2/idd, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (membrane, multispanning, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (mitochondrial ubiquinone-binding, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (mitogen-activated protein kinase-activated, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Transport proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (neutral amino acid transporter, B, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Transport proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(organic anion transporter, multispecific, E, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(osteoblast specific factor 2, mRNA, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Synaptophysin

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(p38, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(pag, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(phorbolin 1, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Aging, animal

Cell aging

Cell proliferation

Diagnosis

Drug screening

Fibroblast

Gene therapy

Human

Immunoassay

Nucleic acid hybridization

Test kits

(proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Probes (nucleic acid)

RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(putative tetraspan transmembrane L6H, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (rat interactor RINI, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT mRNA

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(retinoblastoma susceptibility, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Eye, neoplasm

(retinoblastoma, susceptibility mRNA, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (selenium-containing, up-regulated; proteins and nucleic acids associated with

aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Nucleic acids

Proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(senescence-associated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(sigma 3B, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(sodium/glucose cotransporter-like, mRNA, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(subtilisin-like protein (PACE4), down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(thymosin  $\beta$ -10, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT Proteins

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic

- use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (thyroid hormone receptor coactivating, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Gene, animal  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (tmp-2, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Antibodies and Immunoglobulins  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (to overexpressed senescence-associated proteins, for inhibiting cell senescence; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (translation repressor ntl, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (transmembrane, rnp24, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Tumor necrosis factor receptors  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (type 2, with CD18-related protein, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Keratins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (type II, 58 kD, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Enzymes, analysis  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (ubiquitin-conjugating, UbcH7, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Interleukin 7 receptors  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Heart  
 (ventricle, myosin light chain 2; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing

- senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (zinc finger-containing, clones 23667 and 23775, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Proteins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (zyxin, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT GABA receptors  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 ( $\alpha$ -6 subunit, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT G proteins (guanine nucleotide-binding proteins)  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 ( $\beta$  subunit, mRNA, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT Integrins  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 ( $\beta$ 2, with tumor necrosis factor receptor 2-related protein, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT 119699-77-3, Inositol polyphosphate 5-phosphatase  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (43 kDa, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT 9001-60-9, Lactate dehydrogenase  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (B, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT 9014-24-8  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (II, large subunit, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT 9001-59-6, Pyruvate kinase  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (M2-Type, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

- IT 9024-60-6, Ornithine decarboxylase  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (ODC1, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT 106096-93-9, Basic fibroblast growth factor  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (antisense, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT 9028-04-0, NADH-ubiquinone oxidoreductase  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (chain 6 or subunit B13, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT 9001-40-5, Glucose-6-phosphate dehydrogenase 9002-61-3, Chorionic gonadotropin 9023-46-5, Threonyl-tRNA synthetase 9027-88-7, Short chain acyl-CoA dehydrogenase 9031-71-4, Alanyl-tRNA synthetase 9032-59-1, Fumarylacetoacetate hydrolase 12651-28-4, Transcobalamin II 37318-71-1, Guanosine 5'-monophosphate synthetase 67339-09-7, Thiopurine methyltransferase 83268-44-4 89964-14-7, Prothymosin  $\alpha$  109489-77-2, Tetraneclin 110639-28-6, Thimet oligopeptidase 117698-12-1, Paraoxonase 124861-55-8, TIMP-2 139639-23-9, Tissue-type plasminogen activator 146592-50-9, HEK kinase 300865-46-7, Receptor tyrosine phosphatase- $\gamma$   
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT 9028-86-8, Aldehyde dehydrogenase  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (gene, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT 106283-10-7, Inositol 1,4,5-trisphosphate 3-kinase  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (isoenzyme, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT 37256-73-8, Flavin-containing monooxygenase  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (isoform 1, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)
- IT 109136-49-4, Ubiquitin-specific protease  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (isoform 9, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of

senescence modulators)

IT 9004-06-2, Elastase  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (isoform IIA, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT 9068-52-4, CGMP phosphodiesterase  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (isoform  $\gamma$ , down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT 9027-51-4, Acetylglucosamine 1-phosphate mutase 80449-02-1, Tyrosine kinase  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (mRNA, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT 9054-75-5, Guanylate cyclase  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (mRNA, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT 9054-89-1  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (manganese-dependent, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT 9000-83-3, ATPase  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (mitochondrial coupling factor 6 subunit and transitional endoplasmic reticulum, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT 9028-11-9, Succinate-ubiquinone oxidoreductase  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (mitochondrial, iron sulfur subunit, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT 139497-35-1, GenBank D90402 139793-47-8, GenBank J00650 139805-40-6,  
 GenBank M16652 139825-04-0, GenBank J04142 139840-60-1, GenBank V00518  
 139866-58-3, GenBank M69181 140029-47-6, GenBank X03674 140030-60-0,  
 GenBank M16342 140031-69-2, GenBank M21389 140034-21-5, GenBank M15518  
 140035-58-1, GenBank X06389 140064-33-1, GenBank M63180 140064-70-6,  
 GenBank M55150 140086-88-0, GenBank M72709 140275-68-9, GenBank M37104  
 140279-25-0, GenBank X15088 140284-33-9, GenBank M16650 140285-77-4,  
 GenBank M15400 140286-48-2, GenBank M26393 140287-57-6, GenBank M14630  
 140517-20-0, GenBank J05593 140610-83-9, GenBank M77693 140740-01-8,  
 GenBank M34175 140742-00-3, GenBank M32019 140789-18-0, GenBank M63967  
 140960-36-7, GenBank X04506 141876-71-3, GenBank M94362 143342-04-5,

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 144755-63-5, GenBank M95549 145001-51-0, GenBank S48220 145347-70-2,  
 GenBank S74678 145710-49-2, GenBank L07594 146208-98-2, GenBank S78187  
 146592-52-1, GenBank M83941 147617-78-5, GenBank L09247 148487-82-5,  
 GenBank L13687 150220-18-1, GenBank D14446 150250-02-5, GenBank S62904  
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 154513-28-7, GenBank Z31695 155483-27-5, GenBank U09410 158764-16-0,  
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 GenBank U20238 169922-75-2, GenBank Z50115 172013-51-3, GenBank D79985  
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 GenBank D45399 176136-11-1, GenBank U40462 177072-32-1, GenBank G23173  
 178660-33-8, GenBank X93921 179788-75-1, GenBank U54804 180173-28-8,  
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 384732-21-2, GenBank D67031 384976-60-7, GenBank M55422 385097-49-4,  
 GenBank U21858

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(nucleotide sequence, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT 137700-53-9, GenBank M38591 138791-31-8, GenBank M61733 139810-16-5,  
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 139811-17-9, GenBank M59488 139813-00-6, GenBank J03626 139856-46-5,  
 GenBank X60489 140031-39-6, GenBank M29696 140032-31-1, GenBank D90228  
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 140282-49-1, GenBank Y00711 140283-85-8, GenBank X07834 140286-10-8,  
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 142481-63-8, GenBank X66141 142788-91-8, GenBank X65867 143001-98-3,  
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 143990-13-0, GenBank L01124 144560-37-2, GenBank L05095 144622-72-0,  
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 GenBank X59417 148449-43-8, GenBank L13436 148450-37-7, GenBank D14658  
 148664-96-4, GenBank X67951 150575-08-9, GenBank L14754 151211-08-4,  
 GenBank L19527 151525-12-1, GenBank Z26876 152079-54-4, GenBank Z23090  
 152345-16-9, GenBank D26068 152394-12-2, GenBank Z22818 152651-13-3,  
 GenBank Z29505 153793-54-5, GenBank U01925 155610-76-7, GenBank X79234

156225-89-7, GenBank D21090 156552-95-3, GenBank D31891 156613-26-2,  
 GenBank D16562 156675-03-5, GenBank U08989 156678-95-4, GenBank L14848  
 157575-88-7, GenBank S72008 158024-12-5, GenBank D28118 158340-05-7,  
 GenBank U14972 158480-64-9, GenBank X80909 158929-86-3, GenBank U12465  
 160475-68-3, GenBank U16282 161072-11-3, GenBank L36463 161273-32-1,  
 GenBank S54005 161784-36-7, GenBank L38826 164956-03-0, GenBank U21855  
 165765-64-0, GenBank X84075 165765-87-7, GenBank X86693 167051-98-1,  
 GenBank H41647 171845-36-6, GenBank D63482 172137-43-8, GenBank X87949  
 172249-73-9, GenBank X89750 173231-99-7, GenBank D82580 173806-02-5,  
 GenBank N57937 174239-51-1, GenBank N66609 175829-38-6, GenBank L77701  
 176278-95-8, GenBank W22147 177310-05-3, GenBank X98093 177526-23-7,  
 GenBank U53468 178847-33-1, GenBank U37230 179725-25-8, GenBank U53347  
 180568-15-4, GenBank U62962 181253-47-4, GenBank D83699 181793-81-7,  
 GenBank U59321 181851-17-2, GenBank G29980 182378-63-8, GenBank  
 AA081285 183102-73-0, GenBank X98296 184185-54-4, GenBank AA147844  
 186403-87-2, GenBank U87456 187501-51-5, GenBank U89916 188090-50-8,  
 GenBank U90919 189356-92-1, GenBank D88153 189839-77-8, GenBank U41654  
 191266-78-1, GenBank AA456265 199499-11-1, GenBank AF027204  
 200518-20-3, GenBank AF016270 202639-78-9, GenBank Af040963  
 205460-23-7, GenBank AJ001495 212655-58-8, GenBank D88587 216909-88-5,  
 GenBank AF090950 244700-07-0, GenBank AF168768 245462-52-6, GenBank  
 AF195883 382725-18-0, GenBank D10245 382899-53-8, GenBank G27595  
 384422-15-5, GenBank D00017 384431-43-0, GenBank M55543 384440-79-3,  
 GenBank J03827 384451-81-4, GenBank J02854 384463-40-5, GenBank J04617  
 384474-61-7, GenBank M22348 384481-30-5, GenBank M68891 384487-89-2,  
 GenBank M97388 384526-65-2, GenBank L03558 384591-57-5, GenBank D38548  
 384611-55-6, GenBank X81987 384631-48-5, GenBank D63881 384645-36-7,  
 GenBank U15655 384747-18-6, GenBank U73824 384993-65-1, GenBank S62907  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic  
 use); PRP (Properties); ANST (Analytical study); BIOL (Biological study);  
 USES (Uses)

(nucleotide sequence, up-regulated; proteins and nucleic acids associated  
 with aging and detection in identification of tissues undergoing  
 senescence and of senescence modulators)

IT 142243-02-5, Mitogen-activated protein kinase

RL: MSC (Miscellaneous)

(protein activated by, down-regulated; proteins and nucleic acids  
 associated with aging and detection in identification of tissues  
 undergoing senescence and of senescence modulators)

IT 9001-15-4, Creatine kinase

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic  
 use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(sarcomeric mitochondrial MtCK, up-regulated; proteins and nucleic  
 acids associated with aging and detection in identification of tissues  
 undergoing senescence and of senescence modulators)

IT 9012-42-4, Adenylate cyclase 70712-46-8, 5'-Iodothyronine deiodinase

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic  
 use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological  
 study); USES (Uses)

(type I, down-regulated; proteins and nucleic acids associated with aging  
 and detection in identification of tissues undergoing senescence and of  
 senescence modulators)

IT 9023-70-5, Glutamine synthase 9023-99-8, Cystathione-β-synthase

9027-35-4, Glycine amidinotransferase 9027-46-7, Acetoacetyl-coenzyme A

thiolase 9027-81-0, Adenylosuccinate lyase 9029-17-8, Pyrroline

5-carboxylate reductase 9075-63-2, α-N-Acetylgalactosaminidase

12651-27-3, Transcobalamin I 65979-36-4, Signal peptidase 74870-74-9,

UMP synthase 99194-04-4, Cystatin B 150605-53-1, 5,6-Dihydroxyindole-2-

carboxylic acid oxidase 253170-37-5, Mitogen-and stress-activated

protein kinase-2 272788-46-2, Stratum corneum tryptic enzyme

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT 60382-71-0, Diacylglycerol kinase  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) ( $\zeta$  mRNA, down-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT 9061-61-4, Nerve growth factor  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) ( $\beta$ , up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT 9012-90-2, DNA polymerase  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) ( $\gamma$ , mitochondrial protein, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

IT 37205-63-3, ATP synthase  
 RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) ( $\gamma$ -subunit L-type and mitochondrial D-subunit, up-regulated; proteins and nucleic acids associated with aging and detection in identification of tissues undergoing senescence and of senescence modulators)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Campisi; US 5965543 A 1999 HCPLUS
- (2) Dimri; US 5795728 A 1998 HCPLUS
- (3) Guarante; US 6228583 B1 2001 HCPLUS
- (4) Linskens; US 5744300 A 1998 HCPLUS
- (5) Mudryj; US 5705350 A 1998 HCPLUS
- (6) Villeponteau; US 6054575 A 2000 HCPLUS
- (7) West; US 5589483 A 1996 HCPLUS
- (8) West; US 5874444 A 1999 HCPLUS

L20 ANSWER 4 OF 10 HCPLUS COPYRIGHT 2005 ACS on STN

AN 2002:5045 HCPLUS

DN 136:163171

ED Entered STN: 02 Jan 2002

TI Activation of phospholipase C- $\epsilon$  by heterotrimeric G protein  $\beta\gamma$ -subunits

AU Wing, Michele R.; Houston, Dayle; Kelley, Grant G.; Der, Channing J.; Siderovski, David P.; Harden, T. Kendall

CS Department of Pharmacology, Program in Neurobiology, University of North Carolina School of Medicine, Chapel Hill, NC, 27599, USA

SO Journal of Biological Chemistry (2001), 276(51), 48257-48261  
 CODEN: JBCHA3; ISSN: 0021-9258

PB American Society for Biochemistry and Molecular Biology

DT Journal

LA English

CC 7-3 (Enzymes)

AB PLC- $\epsilon$  was identified recently as a phosphoinositide-hydrolyzing phospholipase C (PLC) containing catalytic domains (X, Y, and C2) common to

all PLC isoenzymes as well as unique CDC25- and Ras-associating domains. Novel regulation of this PLC isoenzyme by the Ras onco-protein and  $\alpha$ -subunits ( $G\alpha 12$ ) of heterotrimeric G proteins was illustrated. Sequence analyses of PLC- $\epsilon$  revealed previously unrecognized PH and EF-hand domains in the amino terminus. The known interaction of  $G\beta\gamma$  subunits with the PH domains of other proteins led us to examine the capacity of  $G\beta\gamma$  to activate PLC- $\epsilon$ . Co-expression of  $G\beta 1\gamma 2$  with PLC- $\epsilon$  in COS-7 cells resulted in marked stimulation of phospholipase C activity.  $G\beta 2$  and  $G\beta 4$  in combination with  $G\gamma 1$ ,  $G\gamma 2$ ,  $G\gamma 3$ , or  $G\gamma 13$  also activated PLC- $\epsilon$  to levels similar to those observed with  $G\beta 1$ -containing dimers of these  $G\gamma$ -subunits.  $G\beta 3$  in combination with the same  $G\gamma$ -subunits was less active, and  $G\beta 5$ -containing dimers were essentially inactive.  $G\beta\gamma$ -promoted activation of PLC- $\epsilon$  was blocked by cotransfection with either of two  $G\beta\gamma$ -interacting proteins, Gail or the carboxyl terminus of G protein receptor kinase.

2. Pharmacol. inhibition of PI3-kinase- $\gamma$  had no effect on  $G\beta 1\gamma 2$ -promoted activation of PLC- $\epsilon$ . Similarly, activation of Ras in the action of  $G\beta\gamma$  is unlikely, because a mutation in the second RA domain of PLC- $\epsilon$  that blocks Ras activation of PLC failed to alter the stimulatory activity of  $G\beta 1\gamma 2$ . Taken together, these results reveal the presence of addnl. functional domains in PLC- $\epsilon$  and add a new level of complexity in the regulation of this novel enzyme by heterotrimeric G proteins.

ST phospholipase C epsilon G protein

IT Protein motifs

(PH (pleckstrin homol.) domain; activation of phospholipase C- $\epsilon$  by heterotrimeric G protein  $\beta\gamma$ -subunits)

IT EF hand

(activation of phospholipase C- $\epsilon$  by heterotrimeric G protein  $\beta\gamma$ -subunits)

IT G proteins (guanine nucleotide-binding proteins)

RL: BSU (Biological study, unclassified); BIOL (Biological study) (activation of phospholipase C- $\epsilon$  by heterotrimeric G protein  $\beta\gamma$ -subunits)

IT Protein sequences

(alignment, phospholipase C domains; activation of phospholipase C- $\epsilon$  by heterotrimeric G protein  $\beta\gamma$ -subunits)

IT 63551-76-8

RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

( $\epsilon$ ; activation of phospholipase C- $\epsilon$  by heterotrimeric G protein  $\beta\gamma$ -subunits)

RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Baek, K; J Biol Chem 2001, V276, P5591 HCPLUS
- (2) Barr, A; Biochemistry 2000, V39, P1800 HCPLUS
- (3) Berridge, M; Annu Rev Biochem 1987, V56, P159 HCPLUS
- (4) Blank, J; J Biol Chem 1992, V267, P23069 HCPLUS
- (5) Boyer, J; J Biol Chem 1992, V267, P25451 HCPLUS
- (6) Brown, H; Mol Pharmacol 1991, V40, P648 HCPLUS
- (7) Camps, M; Eur J Biochem 1992, V206, P821 HCPLUS
- (8) Carman, C; J Biol Chem 2000, V275, P10443 HCPLUS
- (9) Cunningham, M; J Biol Chem 2001, V276, P5438 HCPLUS
- (10) Daaks, Y; Proc Natl Acad Sci U S A 1997, V94, P2180
- (11) Essen, L; Nature 1996, V380, P595 HCPLUS
- (12) Fushman, D; J Biol Chem 1998, V273, P2835 HCPLUS
- (13) Jin, T; J Biol Chem 2001, V276, P30301 HCPLUS

- (14) Jones, D; J Mol Biol 1999, V292, P195 HCAPLUS  
 (15) Kelley, G; EMBO J 2001, V20, P743 HCAPLUS  
 (16) Kelley, L; J Mol Biol 2000, V299, P499 HCAPLUS  
 (17) Kim, Y; J Biol Chem 1929, V274, P26127  
 (18) Koch, W; J Biol Chem 1994, V269, P6193 HCAPLUS  
 (19) Lopez, I; J Biol Chem 2001, V276, P2758 HCAPLUS  
 (20) Mahadevan, D; Biochemistry 1995, V34, P9111 HCAPLUS  
 (21) Meisenhelder, J; Cell 1989, V57, P1099  
 (22) Rhee, S; Annu Rev Biochem 2001, V70, P281 HCAPLUS  
 (23) Rhee, S; J Biol Chem 1992, V267, P12393 HCAPLUS  
 (24) Rhee, S; J Biol Chem 1997, V272, P15045 HCAPLUS  
 (25) Sankaran, B; J Biol Chem 1998, V273, P7148 HCAPLUS  
 (26) Shibatohge, M; J Biol Chem 1998, V273, P6218 HCAPLUS  
 (27) Siderovski, D; Methods Enzymol 2001, V344, P702  
 (28) Smrcka, A; Science 1991, V251, P804 HCAPLUS  
 (29) Sondek, J; Biochem Pharmacol 2001, V61, P1329 HCAPLUS  
 (30) Song, C; J Biol Chem 2001, V276, P2752 HCAPLUS  
 (31) Taylor, S; Nature 1991, V350, P516 HCAPLUS  
 (32) Touhara, K; J Biol Chem 1994, V269, P10217 HCAPLUS  
 (33) Ui, M; Trends Biochem Sci 1995, V20, P303 HCAPLUS  
 (34) Vlahos, C; J Biol Chem 1994, V269, P5241 HCAPLUS  
 (35) Wahl, M; Proc Natl Acad Sci U S A 1989, V86, P1568 HCAPLUS  
 (36) Waldo, G; J Biol Chem 1991, V266, P14217 HCAPLUS  
 (37) Wang, T; J Biol Chem 2000, V275, P7466 HCAPLUS  
 (38) Wu, D; J Biol Chem 1992, V267, P1811 HCAPLUS  
 (39) Zohn, I; Oncogene 2000, V19, P3866 HCAPLUS

L20 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2001:816867 HCAPLUS  
 DN 135:352831  
 ED Entered STN: 09 Nov 2001  
 TI Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression  
 IN Dunphy, William G.; Guo, Zijian  
 PA California Institute of Technology, USA  
 SO PCT Int. Appl., 75 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM C12N  
 CC 1-12 (Pharmacology)  
 Section cross-reference(s): 3, 7, 12  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001083703	A2	20011108	WO 2001-US14646	20010504 <--
	WO 2001083703	A3	20020321		
	W: CA, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	US 2002086392	A1	20020704	US 2001-849617	20010504 <--
	US 6593110	B2	20030715		
	US 2004018603	A1	20040129	US 2003-618173	20030711 <--
PRAI	US 2000-202028P	P	20000504 <--		
	US 2001-849617	A3	20010504 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001083703	ICM	C12N
WO 2001083703	ECLA	C07K014/47A26

US 2002086392 NCL 435/069.100; 435/252.300; 435/320.100; 530/352.000;  
536/023.500

ECLA C07K014/47A26

US 2004018603 NCL 435/194.000; 435/069.100; 435/320.100; 435/325.000;  
536/023.200

ECLA C07K014/47A26

AB The present invention provides polypeptides (Cds1) that are involved in regulating the progression of the cell cycle. The polypeptides are activated by double-stranded (ds) DNA and phosphorylated in response to the presence of ds-DNA. Checkpoint-activating oligonucleotides are the oligonucleotides which are capable of forming a hairpin structure by annealing and thus acting as ds-DNA. Also provided are polynucleotides encoding Cds1 polypeptides and methods for modulating cell cycle progression in a cell. Once activated, the polypeptide can phosphorylate Cdc25 polypeptides. The phosphorylation of the polypeptide and the following phosphorylation of Cdc25 polypeptides ensures that the timing of the cell cycle progression is appropriate. Xenopus homologs of Cds1, XCds1, is being activated by poly(dT)40; having a mol. mass of about 58 kD; having about 517 amino acids; having SQ/TQ motifs at the amino terminal region; having a carboxy terminal kinase domain; and having an amino terminal forkhead-associated domain.

ST Xenopus Cds1 kinase cDNA sequence; oligonucleotide cell cycle checkpoint activating oligonucleotide

IT Xenopus laevis

(Cds1 homolog from; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)

IT Drugs

Molecular cloning

Signal transduction, biological

Test kits

(Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)

IT Animal

Mouse

(Cds1 transgenic; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)

IT Plasmid vectors

Virus vectors

(Cds1-encoding; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)

IT Antibodies

Antisense RNA

Oligonucleotides

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(Cds1; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)

IT Disease, animal

(associated with increased cell cycle progression, treating; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)

IT Vertebrate (Vertebrata)

(cell, expression host; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)

IT Mitosis

(delay, increasing; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)

- IT Genetic polymorphism  
   (detection; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)
- IT Cell proliferation  
   (disorder associated with, treating; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)
- IT DNA  
   RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
   (double-stranded, oligonucleotides forming; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)
- IT cDNA sequences  
   (for Cds1 kinase of Xenopus; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)
- IT Conformation  
   (hairpin loop, oligonucleotides capable of forming; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)
- IT Diagnosis  
   (mol., of Cds1-associated disorder; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)
- IT Antibodies  
   RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
   (monoclonal, Cds1; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)
- IT Protein sequences  
   (of Cds1 kinase of Xenopus; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)
- IT Enzyme functional sites  
   (of Cds1; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)
- IT Drug screening  
   (of modulators of phosphorylation; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)
- IT Computer program  
   (polymorphism indication using; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)
- IT Cell cycle  
   (progression; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)
- IT Phosphorylation, biological  
   (protein, modulation; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)
- IT DNA formation  
   (replication, checkpoints; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)
- IT Algorithm  
   (sequence comparison, computer system comprising; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)
- IT 140208-22-6, Cdc25 phosphatase  
   RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
   (Cdc25 phosphatase, phosphorylating by Cds1 homolog; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)

IT 25086-81-1  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (Cds1 being activated by poly(dT)40; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)

IT 307559-02-0P  
 RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (amino acid sequence; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)

IT 372536-52-2  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (checkpoint-activating oligonucleotide, Oligo 1; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)

IT 372536-53-3  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (checkpoint-activating oligonucleotide, Oligo 2; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)

IT 372536-54-4  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (checkpoint-activating oligonucleotide, Oligo 3; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)

IT 270892-24-5, GenBank AF174295  
 RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
 (nucleotide sequence; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)

IT 244634-79-5P, Protein kinase Cds1  
 RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (protein kinase Cds1; Cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)

IT 372538-17-5 372538-18-6 372538-19-7 372538-20-0 372538-21-1  
 372538-22-2  
 RL: PRP (Properties)  
 (unclaimed nucleotide sequence; cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)

IT 372478-77-8  
 RL: PRP (Properties)  
 (unclaimed sequence; cds1 kinase, checkpoint-activating oligonucleotides, and methods for modulating cell cycle progression)

L20 ANSWER 6 OF 10 HCPLUS COPYRIGHT 2005 ACS on STN

AN 2001:728962 HCPLUS

DN 136:17838

ED Entered STN: 05 Oct 2001

TI Serine-345 is required for Rad3-dependent phosphorylation and function of  
 checkpoint kinase Chk1 in fission yeast  
 AU Lopez-Girona, Antonia; Tanaka, Katsunori; Chen, Xiao-Bo; Baber, Beth A.;  
 McGowan, Clare H.; Russell, Paul  
 CS Departments of Molecular and Cell Biology, MB3, The Scripps Research  
 Institute, La Jolla, CA, 92037, USA  
 SO Proceedings of the National Academy of Sciences of the United States of  
 America (2001), 98(20), 11289-11294  
 CODEN: PNASA6; ISSN: 0027-8424  
 PB National Academy of Sciences  
 DT Journal  
 LA English  
 CC 10-3 (Microbial, Algal, and Fungal Biochemistry)  
 AB Genome integrity is monitored by a checkpoint that delays mitosis in  
 response to DNA damage. This checkpoint is enforced by Chk1, a protein  
 kinase that inhibits the mitotic inducer Cdc25. In fission  
 yeast, Chk1 is regulated by a group of proteins that includes Rad3, a  
 protein kinase related to human ATM and ATR. These kinases phosphorylate  
 serine or threonine followed by glutamine (SQ/TQ).  
 Fission yeast and human Chk1 proteins share two conserved SQ motifs at  
 serine-345 and serine-367. Serine-345 of human Chk1 is phosphorylated in  
 response to DNA damage. Here we report that Rad3 and ATM phosphorylate  
 serine-345 of fission yeast Chk1. Mutation of serine-345 (chk1-S345A)  
 abrogates Rad3-dependent phosphorylation of Chk1 in vivo. The chk1-S345A  
 cells are sensitive to DNA damage and are checkpoint defective. In  
 contrast, mutations of serine-367 and other SQ/TQ  
 sites do not substantially impair the checkpoint or cause damage  
 sensitivity. These findings attest to the importance of serine-345  
 phosphorylation for Chk1 function and strengthen evidence that  
 transduction of the DNA damage checkpoint signal requires direct  
 phosphorylation of Chk1 by Rad3.  
 ST checkpoint kinase Chk1 serine phosphorylation Rad3 fission yeast  
 IT Cell cycle  
     (G2-M arrest; serine-345 is required for Rad3-dependent phosphorylation  
     and function of checkpoint kinase Chk1 in fission yeast)  
 IT DNA  
     RL: BSU (Biological study, unclassified); BIOL (Biological study)  
     (damage; serine-345 is required for Rad3-dependent phosphorylation and  
     function of checkpoint kinase Chk1 in fission yeast)  
 IT Protein motifs  
     (phosphorylation site; serine-345 is required for Rad3-dependent  
     phosphorylation and function of checkpoint kinase Chk1 in fission  
     yeast)  
 IT Phosphorylation, biological  
     (protein; serine-345 is required for Rad3-dependent phosphorylation and  
     function of checkpoint kinase Chk1 in fission yeast)  
 IT Schizosaccharomyces pombe  
     Signal transduction, biological  
         (serine-345 is required for Rad3-dependent phosphorylation and function  
         of checkpoint kinase Chk1 in fission yeast)  
 IT 56-45-1, L Serine, biological studies 154907-65-0, Kinase  
     (phosphorylating), gene chk1 protein 375856-04-5, Kinase  
     (phosphorylating), gene rad3 protein  
     RL: BSU (Biological study, unclassified); BIOL (Biological study)  
     (serine-345 is required for Rad3-dependent phosphorylation and function  
     of checkpoint kinase Chk1 in fission yeast)  
 IT 182970-53-2, ATM protein kinase  
     RL: BSU (Biological study, unclassified); BIOL (Biological study)  
     (serine-345 of checkpoint kinase Chk1 is phosphorylated by fission  
     yeast Rad3 and human ATM kinases)

RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Baber-Furnari, B; Mol Biol Cell 2000, V11, P1 HCPLUS
- (2) Bahler, J; Yeast 1998, V14, P943 HCPLUS
- (3) Bentley, N; EMBO J 1996, V15, P6641 HCPLUS
- (4) Blasina, A; Curr Biol 1999, V9, P1 HCPLUS
- (5) Blasina, A; Curr Biol 1999, V9, P1135 HCPLUS
- (6) Caspari, T; Mol Cell Biol 2000, V20, P1254 HCPLUS
- (7) Chen, P; Cell 2000, V100, P681 HCPLUS
- (8) Cimprich, K; Proc Natl Acad Sci USA 1996, V93, P2850 HCPLUS
- (9) Cliby, W; EMBO J 1998, V17, P159 HCPLUS
- (10) Edwards, R; Nat Cell Biol 1999, V1, P393 HCPLUS
- (11) Elledge, S; Science 1996, V274, P1664 HCPLUS
- (12) Ford, J; Science 1994, V265, P533 HCPLUS
- (13) Furnari, B; Mol Biol Cell 1999, V10, P833 HCPLUS
- (14) Furnari, B; Science 1997, V277, P1495 HCPLUS
- (15) Guo, Z; Genes Dev 2000, V14, P2745 HCPLUS
- (16) Hartwell, L; Science 1989, V246, P629 HCPLUS
- (17) Keegan, K; Genes Dev 1996, V10, P2423 HCPLUS
- (18) Kim, S; J Biol Chem 1999, V274, P37538 HCPLUS
- (19) Kumagai, A; Mol Cell 2000, V6, P839 HCPLUS
- (20) Liu, Q; Genes Dev 2000, V14, P1448 HCPLUS
- (21) Lopez-Girona, A; Curr Biol 2001, V11, P50 HCPLUS
- (22) Lopez-Girona, A; Nature (London) 1999, V397, P172 HCPLUS
- (23) Martinho, R; EMBO J 1998, V17, P7239 HCPLUS
- (24) Melchionna, R; Nat Cell Biol 2000, V2, P762 HCPLUS
- (25) Oe, T; Dev Biol 2001, V229, P250 HCPLUS
- (26) Rhind, N; Curr Opin Cell Biol 1998, V10, P749 HCPLUS
- (27) Rhind, N; Genes Dev 1997, V11, P504 HCPLUS
- (28) Rhind, N; J Cell Sci 2000, V113, P3889 HCPLUS
- (29) Saka, Y; Genes Dev 1997, V11, P3387 HCPLUS
- (30) Savitsky, K; Science 1995, V268, P1749 HCPLUS
- (31) Shimida, M; Mol Biol Cell 1999, V10, P3991
- (32) Tanaka, K; Mol Cell Biol 2001, V21, P3398 HCPLUS
- (33) Walworth, N; Nature (London) 1993, V363, P368 HCPLUS
- (34) Walworth, N; Science 1996, V271, P353 HCPLUS
- (35) Wang, S; FEBS Lett 2000, V487, P277 HCPLUS
- (36) Willson, J; Nucleic Acids Res 1997, V25, P2138 HCPLUS
- (37) Wright, J; Proc Natl Acad Sci USA 1998, V95, P7445 HCPLUS
- (38) Zhao, H; Mol Cell Biol 2001, V21, P4129 HCPLUS

L20 ANSWER 7 OF 10 HCPLUS COPYRIGHT 2005 ACS on STN

AN 2001:465105 HCPLUS

DN 135:193652

ED Entered STN: 28 Jun 2001

TI The cell cycle-regulatory **CDC25A** phosphatase inhibits apoptosis signal-regulating kinase 1

AU Zou, Xianghong; Tsutsui, Tateki; Ray, Dipankar; Blomquist, James F.; Ichijo, Hidenori; Ucker, David S.; Kiyokawa, Hiroaki

CS Departments of Molecular Genetics, University of Illinois College of Medicine, Chicago, IL, 60607, USA

SO Molecular and Cellular Biology (2001), 21(14), 4818-4828  
CODEN: MCEBD4; ISSN: 0270-7306

PB American Society for Microbiology

DT Journal

LA English

CC 14-1 (Mammalian Pathological Biochemistry)

AB **CDC25A** phosphatase promotes cell cycle progression by activating G1 cyclin-dependent kinases and has been postulated to be an oncogene because of its ability to cooperate with RAS to transform rodent

fibroblasts. In this study, we have identified apoptosis signal-regulating kinase 1 (ASK1) as a **CDC25A**-interacting protein by yeast two-hybrid screening. ASK1 activates the p38 mitogen-activated protein kinase (MAPK) and c-Jun NH<sub>2</sub>-terminal protein kinase-stress-activated protein kinase (JNK/SAPK) pathways upon various cellular stresses. Coimmunopptn. studies demonstrated that **CDC25A** phys. assocs. with ASK1 in mammalian cells, and immunocytochem. with confocal laser-scanning microscopy showed that these two proteins colocalize in the cytoplasm. The carboxyl terminus of **CDC25A** binds to a domain of ASK1 adjacent to its kinase domain and inhibits the kinase activity of ASK1, independent of and without effect on the phosphatase activity of **CDC25A**. This inhibitory action of **CDC25A** on ASK1 activity involves diminished homo-oligomerization of ASK1. Increased cellular expression of wild-type or phosphatase-inactive **CDC25A** from inducible transgenes suppresses oxidant-dependent activation of ASK1, p38, and JNK1 and reduces specific sensitivity to cell death triggered by oxidative stress, but not other apoptotic stimuli. Thus, increased expression of **CDC25A**, frequently observed in human cancers, could contribute to reduced cellular responsiveness to oxidative stress under mitogenic or oncogenic conditions, while it promotes cell cycle progression. These observations propose a mechanism of oncogenic transformation by the dual function of **CDC25A** on cell cycle progression and stress responses.

- ST     **CDC25A** cell cycle apoptosis carcinogenesis
- IT     Apoptosis  
       Cell cycle  
       Oxidative stress, biological  
       Polymerization  
       Signal transduction, biological  
       Transformation, neoplastic  
           (CDC25A phosphatase associated with oxidative stress promotes cell cycle progression by activating G1 cyclin-dependent kinases in carcinogenesis)
- IT     Reactive oxygen species  
       RL: ADV (Adverse effect, including toxicity); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
           (CDC25A phosphatase associated with oxidative stress promotes cell cycle progression by activating G1 cyclin-dependent kinases in carcinogenesis)
- IT     Interphase (cell cycle)  
       (G1-phase; CDC25A phosphatase associated with oxidative stress promotes cell cycle progression by activating G1 cyclin-dependent kinases in carcinogenesis)
- IT     Polymerization  
       (oligomerization; CDC25A phosphatase associated with oxidative stress promotes cell cycle progression by activating G1 cyclin-dependent kinases in carcinogenesis)
- IT     Phosphorylation, biological  
       (protein; CDC25A phosphatase associated with oxidative stress promotes cell cycle progression by activating G1 cyclin-dependent kinases in carcinogenesis)
- IT     140208-22-6, **CDC25A** phosphatase  
       RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)  
           (CDC25A phosphatase associated with oxidative stress promotes cell cycle progression by activating G1 cyclin-dependent kinases in carcinogenesis)

- IT 7782-44-7D, Oxygen, reactive species  
 RL: ADV (Adverse effect, including toxicity); BPR (Biological process);  
 BSU (Biological study, unclassified); BIOL (Biological study); PROC  
 (Process)  
 (CDC25A phosphatase associated with oxidative stress promotes  
 cell cycle progression by activating G1 cyclin-dependent kinases in  
 carcinogenesis)
- IT 155215-87-5, Stress-activated protein kinase 165245-96-5, p38  
 mitogen-activated protein kinase 185464-61-3, ASK1 kinase 192230-91-4,  
 MKK3 kinase 194739-73-6, MKK6 kinase 289898-51-7, JNK1  
 RL: BAC (Biological activity or effector, except adverse); BOC (Biological  
 occurrence); BSU (Biological study, unclassified); BIOL (Biological  
 study); OCCU (Occurrence)  
 (CDC25A phosphatase associated with oxidative stress promotes  
 cell cycle progression by activating G1 cyclin-dependent kinases in  
 carcinogenesis)

RE.CNT 71 THERE ARE 71 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Adler, V; Oncogene 1999, V18, P6104 HCAPLUS
- (2) Behrens, A; Nat Genet 1999, V21, P326 HCAPLUS
- (3) Biguet, C; J Biol Chem 1994, V269, P28865 HCAPLUS
- (4) Blomberg, I; Mol Cell Biol 1999, V19, P6183 HCAPLUS
- (5) Bunz, F; Science 1998, V282, P1497 HCAPLUS
- (6) Cangi, M; J Clin Investig 2000, V106, P753 HCAPLUS
- (7) Chang, H; Science 1998, V281, P1860 HCAPLUS
- (8) Chen, X; Mol Cell Biol 1999, V19, P4695 HCAPLUS
- (9) Chen, Z; Oncogene 1999, V18, P173 HCAPLUS
- (10) Conklin, D; Proc Natl Acad Sci 1995, V92, P7892 HCAPLUS
- (11) Derijard, B; Science 1995, V267, P682 HCAPLUS
- (12) Draetta, G; Biochim Biophys Acta 1997, V1332, PM53 HCAPLUS
- (13) Eckstein, J; Protein Sci 1996, V5, P5 HCAPLUS
- (14) Fauman, E; Cell 1998, V93, P617 HCAPLUS
- (15) Galaktionov, K; Cell 1991, V67, P1181 HCAPLUS
- (16) Galaktionov, K; Genes Dev 1995, V9, P1046 HCAPLUS
- (17) Galaktionov, K; Nature 1996, V382, P511 HCAPLUS
- (18) Galaktionov, K; Science 1995, V269, P1575 HCAPLUS
- (19) Gasparotto, D; Cancer Res 1997, V57, P2366 HCAPLUS
- (20) Gotoh, Y; J Biol Chem 1998, V273, P17477 HCAPLUS
- (21) Guyton, K; Br Med Bull 1993, V49, P523 HCAPLUS
- (22) Harvey, K; J Cell Biol 2000, V148, P59 HCAPLUS
- (23) Hoeflich, K; Oncogene 1999, V18, P5814 HCAPLUS
- (24) Holland, P; J Biol Chem 1997, V272, P24994 HCAPLUS
- (25) Hunter, T; Cell 1994, V79, P573 HCAPLUS
- (26) Ichijo, H; Oncogene 1999, V18, P6087 HCAPLUS
- (27) Ichijo, H; Science 1997, V275, P90 HCAPLUS
- (28) Ihle, J; Cell 2000, V102, P131 HCAPLUS
- (29) Jacobson, M; Trends Biochem Sci 1996, V21, P83 HCAPLUS
- (30) Jinno, S; EMBO J 1994, V13, P1549 HCAPLUS
- (31) Karin, M; Ann NY Acad Sci 1998, V851, P139 HCAPLUS
- (32) Klaunig, J; Environ Health Perspect 1998, V106(Suppl 1), P289
- (33) Ko, L; Genes Dev 1996, V10, P1054 HCAPLUS
- (34) Krupitza, G; Cell Death Differ 1998, V5, P758 HCAPLUS
- (35) Leppa, S; Oncogene 1999, V18, P6158 HCAPLUS
- (36) Li, N; FASEB J 1999, V13, P1137 HCAPLUS
- (37) Liu, H; Mol Cell Biol 2000, V20, P2198 HCAPLUS
- (38) Lopez-Girona, A; Nature 1999, V397, P172 HCAPLUS
- (39) Mailand, N; Science 2000, V288, P1425 MEDLINE
- (40) Mercurio, F; Curr Opin Cell Biol 1999, V11, P226 HCAPLUS
- (41) Migliaccio, E; Nature 1999, V402, P309 HCAPLUS
- (42) Moriguchi, T; EMBO J 1997, V16, P7045 HCAPLUS

- (43) Moriguchi, T; J Biol Chem 1996, V271, P13675 HCAPLUS  
 (44) Nagata, A; New Biol 1991, V3, P959 HCAPLUS  
 (45) Nishitoh, H; Mol Cell 1998, V2, P389 HCAPLUS  
 (46) Ono, K; Cell Signal 2000, V12, P1 HCAPLUS  
 (47) Parsons, R; Curr Opin Oncol 1998, V10, P88 HCAPLUS  
 (48) Peng, C; Science 1997, V277, P1501 HCAPLUS  
 (49) Raingeaud, J; Mol Cell Biol 1996, V16, P1247 HCAPLUS  
 (50) Reed, S; Cancer Surv 1997, V29, P7 HCAPLUS  
 (51) Sadhu, K; Proc Natl Acad Sci 1990, V87, P5139 HCAPLUS  
 (52) Saha, P; Mol Cell Biol 1997, V17, P4338 HCAPLUS  
 (53) Saitoh, M; EMBO J 1998, V17, P2596 HCAPLUS  
 (54) Sanchez, I; Nature 1994, V372, P794 HCAPLUS  
 (55) Sanchez, Y; Science 1997, V277, P1497 HCAPLUS  
 (56) Shen, Z; Mutat Res 1996, V364, P81 HCAPLUS  
 (57) Sherr, C; Genes Dev 1999, V13, P1501 HCAPLUS  
 (58) Stein, B; J Biol Chem 1996, V271, P11427 HCAPLUS  
 (59) Tournier, C; Proc Natl Acad Sci 1997, V94, P7337 HCAPLUS  
 (60) Toyokuni, S; Biotherapy 1998, V11, P147 HCAPLUS  
 (61) Vigo, E; Mol Cell Biol 1999, V19, P6379 HCAPLUS  
 (62) Wang, X; J Biol Chem 1996, V271, P31607 HCAPLUS  
 (63) Wu, W; Cancer Res 1998, V58, P4082 HCAPLUS  
 (64) Wu, Z; Mol Cell Biol 1997, V17, P7407 HCAPLUS  
 (65) Wuarin, J; Cell 1996, V85, P785 HCAPLUS  
 (66) Xia, K; Mol Cell Biol 1999, V19, P4819 HCAPLUS  
 (67) Xia, Z; Science 1995, V270, P1326 HCAPLUS  
 (68) Yaffe, M; Cell 1997, V91, P961 HCAPLUS  
 (69) Yao, F; Hum Gene Ther 1998, V9, P1939 HCAPLUS  
 (70) Yao, Z; J Biol Chem 1997, V272, P32378 HCAPLUS  
 (71) Zhang, L; Proc Natl Acad Sci 1999, V96, P8511 HCAPLUS

L20 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2001:338762 HCAPLUS  
 DN 134:362292  
 ED Entered STN: 11 May 2001  
 TI Methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile  
 IN Farr, Spencer  
 PA Phase-1 Molecular Toxicology, USA  
 SO PCT Int. Appl., 222 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM C12Q001-68  
 ICS G01N033-50  
 CC 3-4 (Biochemical Genetics)  
 Section cross-reference(s): 1, 6, 7, 13, 15  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001032928	A2	20010510	WO 2000-US30474	20001103
	WO 2001032928	A3	20020725		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			

PRAI US 1999-165398P P 19991105  
 US 2000-196571P P 20000411

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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WO 2001032928	ICM	C12Q001-68
	ICS	G01N033-50

WO 2001032928	ECLA	C12Q001/68M; G01N033/68V
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AB The invention discloses methods, gene databases, gene arrays, protein arrays, and devices that may be used to determine the hypersensitivity of individuals to a given agent, such as drug or other chemical, in order to prevent toxic side effects. In one embodiment, methods of identifying hypersensitivity in a subject by obtaining a gene expression profile of multiple genes associated with hypersensitivity of the subject suspected to be hypersensitive, and identifying in the gene expression profile of the subject a pattern of gene expression of the genes associated with hypersensitivity are disclosed. The gene expression profile of the subject may be compared with the gene expression profile of a normal individual and a hypersensitive individual. The gene expression profile of the subject that is obtained may comprise a profile of levels of mRNA or cDNA. The gene expression profile may be obtained by using an array of nucleic acid probes for the plurality of genes associated with hypersensitivity. The expression of the genes predetd. to be associated with hypersensitivity is directly related to prevention or repair of toxic damage at the tissue, organ or system level. Gene databases arrays and apparatus useful for identifying hypersensitivity in a subject are also disclosed.

ST drug hypersensitivity gene expression DNA microarray app

IT Uncoupling protein

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (1, 2 and 3; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (11 beta-hydroxysteroid dehydrogenase type II; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (12-lipoxygenase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Metallothioneins

Presenilins

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cyclin dependent kinase inhibitors

(1A; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Metallothioneins

Synaptobrevins  
 Thrombospondins

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Connexins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(30; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Connexins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(32; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Syntaxins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(3; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Connexins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(40; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Bone morphogenetic proteins  
Keratins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(4; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(5-aminolevulinate synthase 2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(6-C-kine; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(60S ribosomal protein L6; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Keratins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(6; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cyclins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(A, A1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Apolipoproteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(A-I; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Apolipoproteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)  
 (A-II; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ACP (acyl-carrier); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transport proteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ADP/ATP carrier; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ALDH1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ALDH2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ATF (activating transcription factor), ATF3 and ATF4; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ATF-2 (activating transcription factor 2); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ATF4; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ATP dep. helicase II (70kDa); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ATP dep. helicase II (Ku80); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ATPase subunit 6; methods of determining individual hypersensitivity to a

- pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (B-myb; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Platelet-derived growth factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (B; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (BAG-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Multidrug resistance proteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (BCRP (breast cancer resistance protein); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (BRCA1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Sialoglycoproteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (BSP II (bone sialoglycoprotein II); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (Bak; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (Bax (alpha); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (Bax; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (Bcl-xL; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Chemokines  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (C-C, C10; methods of determining individual hypersensitivity to a

- pharmaceutical agent from gene expression profile)
- IT Chemokines  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (C-C, I-309; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Apolipoproteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (C-III; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (C-reactive; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (C/EBP (CCAAT box/enhancer element-binding protein), ε; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (C/EBP-α (CCAAT box/enhancer element-binding protein α); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Glycoproteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (C4bp (complement C4b-binding protein); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (C5a anaphylatoxin receptor; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Complement receptors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (C5a; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (CAP (adenylate cyclase-associated protein); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT CD antigens  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (CD82; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)  
(CHD2 and CIG49; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(CIDEB; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(CLP; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(CTCF; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Chemokine receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(CXCR4; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(CYP1A1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(CYP4A; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(Chk1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Lung  
(Clara cell; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(Clusterin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(Csa-19; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cyclins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(D1, A1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cyclins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)  
(D3; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(DCC (deleted in colorectal cancer); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(DEAD-box protein p72; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(DNA binding protein inhibitor ID-2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(DNA dependent helicase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(DNA dependent protein kinase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Enzymes, biological studies  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(DNA helicase II; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Enzymes, biological studies  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(DNA helicases; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(DNA ligase IV; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(DNA polymerase alpha; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(DNA repair protein XRCC1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(DNA topoisomerase I; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(DNA-binding, APRF; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(DNA-binding, p48; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(DNA-binding, zinc finger-containing, ZNF134; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(DNA-binding, zinc finger-containing; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(DOC-2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(DRA; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Dopamine receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(D2(short); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Calbindins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(D28k; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Calbindins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(D9k; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cadherins  
Selectins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(E-; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)  
 (E-cadherin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (E2F1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Apolipoproteins  
 Cyclins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (E; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ELAV-like neuronal protein-2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ERA-B; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ERCC-5; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ERCC1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ERCC3; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ERp72; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (Egr-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (FEN-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(FIC1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(FYN proto-oncogene; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transcription factors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(Fra-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(G/T mismatch binding protein; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cyclins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(G1, cyclin G1 interacting protein; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(G6PD; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cyclins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(G; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(GAS-7, GCLR, and GCLS; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

to  
a pharmaceutical agent from gene expression profile)

IT Gene, animal  
Transcription factors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(GOS24; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(GRP (glucose-regulated protein), glucose-regulated protein 170; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(GRP58 (glucose-regulated protein, 58 kDa); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

- IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(GRP78 (glucose-regulated protein, 78,000-mol-weight); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(GRP94; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(GT mismatch binding protein; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(Gadd153; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(Gadd45; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(Garg-16; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Ferritins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(H chain; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Glycoproteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(H-CAM (homing cell adhesion mol.); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Cadherins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(H-cadherins; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Histones  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(H2A; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Histones  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(H2B; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(HDLCl; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transcription factors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(HIF-1 (hypoxia-inducible factor 1), α; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(HMG CoA reductase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT High-mobility group proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(HMG1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transcription factors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(HNF-4 (hepatocyte nuclear factor 4); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(HNF4; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Heat-shock proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(HSP 27; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Heat-shock proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(HSP 47; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Heat-shock proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(HSP 70; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Heat-shock proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(HSP 90; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Heat-shock proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(HSP12; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal

- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (HSP70; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (Hsp90; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (I, II and III subunits for cytochrome oxidase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Synaptotagmin  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (I; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Cell adhesion molecules  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ICAM-1 (intercellular adhesion mol. 1); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Cell adhesion molecules  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ICAM-2 (intercellular adhesion mol. 2); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Cell adhesion molecules  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ICAM-3 (intercellular adhesion mol. 3); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ICE RelII; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ID-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Metallothioneins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (IG; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Insulin-like growth factor-binding proteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (IGF-BP-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

- IT Insulin-like growth factor-binding proteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (IGF-BP-2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Insulin-like growth factor-binding proteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (IGF-BP-3; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Insulin-like growth factor-binding proteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (IGF-BP-5; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Synaptophysin  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (II; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (IL1B; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (IRF-7; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (ISG-15; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (ISGF-3 (interferon-stimulated gene factor 3); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (Id2 (inhibitor of differentiation 2); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Immunoglobulin receptors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (IgG type I; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (IkB-a; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)  
 (IL-13; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (IL-8; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Phosphoproteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (I $\kappa$ B- $\alpha$  (inhibitor of RNA formation factor NF- $\kappa$ B,  $\alpha$ ); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (JNK1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (Jagged 1 and Jagged 2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

to  
 a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (JunD; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cadherins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (K-; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Keratins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (K17; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (Ki67; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Liver  
 (Kupffer cell; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (L-FABP (liver fatty acid-binding protein); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(L09604; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Ribosomal proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(L13; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Ribosomal proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(L13A and L37a; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Ribosomal proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(L34; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Ribosomal proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(L6; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Lipoprotein receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(LDL, low d. Lipoprotein; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(Liposin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(MAD related protein 2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

to  
Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(MAP kinase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cytokines  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(MBP (major basic protein); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(MCL-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
Multidrug resistance proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(MDR1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Multidrug resistance proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(MDR2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT P-glycoproteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(MDR3; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transcription factors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(MEF-2 (myocyte-specific enhancer element-binding factor 2); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Heterocompatibility antigens  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(MHC (major heterocompatibility complex), MHC class II transactivator; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Heterocompatibility antigens  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(MHC (major heterocompatibility complex), class I; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Heterocompatibility antigens  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(MHC (major heterocompatibility complex), class II; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
Proteins, specific or class  
Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(MLH1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Multidrug resistance proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(MRP4; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(MSH2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (MSH2M; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (MSH3 gene; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (MSH3; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (MTF-1 (metal-regulatory transcription factor 1); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (Mcl-1 (myeloid cell leukemia sequence-1); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (Mim; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (MnSOD; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Antigens  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (Mr 110,000; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cadherins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (N-; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cell adhesion molecules  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (N-CAM; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (NADH oxidoreductase subunit MWFE; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Antigens

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(NCA (nonspecific crossreactive antigen); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transcription factors

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(NF-A2 (nuclear factor A2); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transcription factors

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(NF-E2 (nuclear factor erythroid 2), NF-E2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transcription factors

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(NF-III (nuclear factor III); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transcription factors

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(NF-IV (nuclear factor IV); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transcription factors

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(NF- $\kappa$ B (nuclear factor  $\kappa$ B); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(NMB; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Antigens

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(NY-LU-12; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Steroid receptors

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(Ner-1S; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Notch (receptor)

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(Notch1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(Nucleosome assembly protein; methods of determining individual

hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cadherins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (OB-cadherin 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (OTK27; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (OX40 ligand; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cadherins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (P-; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Glycoproteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (P170; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (P311; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (PABP (poly(A)-binding protein); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (PAPS synthetase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (PARP; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (PBX2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)  
(PCDH7; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(PCNA; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(PDGF associated protein; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cell adhesion molecules  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(PECAM-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(PEG3; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(PIC1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(PMS2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(PTEN/MMAC1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Nerve  
(Purkinje cell; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(RAD 51; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(RAD23; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

- (RAD50; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (RAD51 homolog; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (RAD52; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (RAD; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (RAG-1 (recombination-activating gene, 1); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (RANTES; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (RAP1A; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Retinoic acid receptors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (RAR- $\beta$ ; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Retinoic acid receptors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (RAR- $\gamma$ ; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT DNA formation factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (RF-A (replication factor A); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT DNA formation factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (RF-C (réplication factor C); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Ribonucleoproteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (RNA U1-containing, C; methods of determining individual hypersensitivity to a

- pharmaceutical agent from gene expression profile)
- IT Enzymes, biological studies  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(RNA-unwinding, helicases; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(RPS21, RPS24, RPS4X and S7; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Retinoid X receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(RXRa; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Retinoid X receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(RXRB; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Retinoid X receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(RXR $\gamma$ ; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(Rad50; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Transcription factors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(Rb, p107; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Transcription factors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(Rb; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(Ref-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(Rel-B; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(Retinoid X receptor alpha; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

- IT Ribosomal proteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (S12; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Ribosomal proteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (S21, S7 and RPS24; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Ribosomal proteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (S4, X-linked; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Ribosomal proteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (S4; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Ribosomal proteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (S9; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (SAA1 (serum amyloid A1); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (SAA2 (serum amyloid A2); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (SAA3 (serum amyloid A3); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Glycophosphoproteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (SCP2 (hydroxy steroid-carrier protein 2); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Sialoglycoproteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (SGP-2 (sulfoglycoprotein 2); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (SII; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

- (SMT3A and SMT3B; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (SOCS-1 (suppressor of cytokine signaling-1); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (SOCS-3 (suppressor of cytokine signaling-3); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (SQM1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (SRE-BP (steroid-responsive element-binding protein), 2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (SRF (serum response factor); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (STAT1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (STAT2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (STAT3; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (Sec23B; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (Sod; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (SoxS; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (T cell activation gene 3; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (T-cell cyclophilin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (TCF-1 (T-cell factor 1); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (TFIID (transcription factor IID); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (TP53; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (TRADD; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (TRAF2 (tumor necrosis factor receptor-associated factor 2); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (UCP2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (UDP-glucuronosyltransferase 2B; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Annexins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (V; methods of determining individual hypersensitivity to a pharmaceutical

- agent from gene expression profile)
- IT Transport proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(VACHT (vesicular acetylcholine transporter); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Cell adhesion molecules  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(VCAM-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(VCAM1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Transport proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(VMAT; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(Wnt-13; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(XP-C; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(XRCC1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(ZO-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(acute-phase, Major acute phase protein alpha-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(acyl CoA dehydrogenase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(adenine nucleotide translocator 1; methods of determining individual

hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (alc. dehydrogenase 2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (alc. dehydrogenase 4; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (alpha-1 acid glycoprotein; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (alpha-2 macroglobulin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

to  
 a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (alpha-catenin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (alpha-tubulin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Macrophage inflammatory protein 2  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (alpha; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Macrophage  
 (alveolar; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (amyloid homolog; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (annexin V; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Integrins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (antigens CD11a; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(antiquitin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (apolipoprotein AII; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (apolipoprotein CIII; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

a

IT Cell cycle  
 (arrest, genes associated with; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Heart, disease  
 (arrhythmia; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (aspartate aminotransferase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ataxia telangiectasia; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

to

IT Phagocytosis  
 (autophagocytosis, genes associated with; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (bcl-2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (bcl-3; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Natural products, pharmaceutical  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (belladonna; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (beta actin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Potassium channel  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)  
 (beta subunit; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transport proteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (bile acid-sodium-cotransporting; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transport proteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (bile acid-transporting, bile salt export pump; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Biliary tract  
 (bile duct, epithelium; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

to

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (bilirubin UDP-glucuronosyltransferase isoenzyme 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (biliverdin reductase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Spreading  
 (biol., genes associated with; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Macromolecular compounds  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (biol., prevention or repair of toxic damage of; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Neurotrophic factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (brain-derived; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (branched chain acyl-CoA oxidase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (c-Ha-ras; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (c-abl; methods of determining individual hypersensitivity to a

pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(c-erbB2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(c-fms; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
Transcription factors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(c-fos; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
Transcription factors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(c-jun; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transcription factors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(c-myb; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(c-myc binding protein; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

to  
a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(c-myc; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(calbindin D; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(calnexin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(calprotectins; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(calreticulin-B; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(calreticulin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(carnitine palmitoyl CoA transferase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(caspase 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(caspase 3; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(caspase 7; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(caspase 8; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(catalase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(catechol-O-Me transferase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(cathepsin L; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Phosphoproteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(caveolins, Caveolin-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

to  
a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(cdk4; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Connective tissue  
(cell; methods of determining individual hypersensitivity to a pharmaceutical

agent from gene expression profile)

IT Heart  
Lung  
(cells of; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Toxicity  
(cellular, genes associated with; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(ceruloplasmin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Biliary tract  
(cholestasis; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Rhythm, biological  
(circadian, genes associated with; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(clone 22 mRNA, alpha-1 splice variant; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(clone RP-11-468G5; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Collagens, biological studies  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
(collagen-alginate; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(collagenase type I interstitial; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Intestine  
(colon; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(colony stimulating factor 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Estrogens  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(conjugated; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(connexin 32; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (connexin 40; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (creatine kinase B; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (cyclin D3; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (cyclin G; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (cyclin dependent kinase inhibitor p27kip1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (cytochrome c oxidase subunit IV; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Mitochondria  
 (damage, genes associated with; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT DNA  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (damage, prevention; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cell differentiation  
 (de-differentiation, genes associated with; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cytokine receptors  
 Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (death receptor 5; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (defender against cell death 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

profile)  
 IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (defender against cell death-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (delta like; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Mental disorder  
 (dementia; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Hematopoiesis  
 (disorder, myelosuppression; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Elongation factors (protein formation)  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (eEF-1 $\alpha$ , PTI-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Glycophosphoproteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (endoplasmic reticulum; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Blood vessel  
 (endothelium; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (enolase alpha; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Brain  
 (ependyma, cells; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Lung  
 (epithelium, columnar ciliated; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (exchange factor; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (excision repair ERCC3 and ERCC5 and ERCC6; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Kidney, disease  
 (failure; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Carcinoembryonic antigen

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(family member 2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
Receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(farnesol receptor; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(fas antigen; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Liver, disease  
(fatty; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(ferritin H-chain; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Muscle  
(fiber; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(flavin-containing monooxygenase 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(for  $\gamma$ -interferon inducible early response gene F; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
Transcription factors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(fosB; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(gamma-glutamyl transpeptidase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(gap junction-specific; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(gene ERCC1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Phosphoproteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (gene L-myc; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (gene RAD52; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (gene cdc25; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT DNA formation factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (gene dnaC; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Vascular endothelial growth factor receptors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (gene flt 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Phosphoproteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (gene fyn; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (gene gadd153; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Lipoproteins  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (gene ospA; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (gene pim-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Agranulocytosis  
 Apoptosis  
 Cell adhesion  
 Cell aging  
 Cell migration  
 Mutation  
 Neoplasm  
 Recombination, genetic  
 Signal transduction, biological  
 Teratogenesis  
 Transformation, genetic  
 (genes associated with; methods of determining individual hypersensitivity to a

pharmaceutical agent from gene expression profile)  
 IT Kidney, disease  
     (glomerulitis; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Gene, animal  
   RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (glucosylceramide synthase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Proteins, specific or class  
   RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (glutaredoxins; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Gene, animal  
   RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (glutathione S transferase theta-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Gene, animal  
   RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (glutathione peroxidase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Gene, animal  
   RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (glutathione reductase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 to  
     a pharmaceutical agent from gene expression profile)  
 IT Gene, animal  
   RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (glutathione synthetase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Cell membrane  
     (glycoprotein; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Intestine  
     (goblet cell; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Gene, animal  
   RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (growth arrest specific protein 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Gene, animal  
   RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (growth arrest specific protein 3; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Proteins, specific or class  
   RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (growth arrest-specific protein 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression

profile)  
 IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (growth arrest-specific protein 3; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (hSNF2b; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (hamartin, hamartin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Enzymes, biological studies  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (helicase ERCC3; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (helicase like; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (heme-binding, 23; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (hepatic lipase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Liver  
 (hepatocyte; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Immunophilins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (homolog ARA9; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Allergy  
 (hypersensitivity; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (hypoxanthine-guanine phosphoribosyltransferase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)  
 IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (hypoxia inducible factor 1 alpha; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Vaccines  
     (inactivated hepatitis; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (inhibitor of apoptosis protein 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (inhibitor of apoptosis protein 2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Kidney, disease  
     (injury; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (insulin-like growth factor 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (insulin-like growth factor binding protein 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (integrin beta-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (intercellular adhesion mol.-3; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (interferon inducible protein 15; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cytokines  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (interferon-inducible IP-10; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (involutrins; methods of determining individual hypersensitivity to a

pharmaceutical agent from gene expression profile)

IT Natural products, pharmaceutical  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (ipecac; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transport proteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (iron permease FTR1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Disease, animal  
 (irritation; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (junB; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transcription factors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (junD; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Kidney  
 (juxtaglomerular cell; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Animal cell  
 (lacis; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Immunoglobulins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (lambda heavy chain; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Meninges  
 (leptomeninges, cells; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (leukemia inhibitory factor; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Dyneins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (light chain 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (lipopolysaccharide binding protein; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

- (lysyl oxidase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Chemokines  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (macrophage inflammatory protein 1, alpha and beta; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Macrophage migration inhibitory factor  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (macrophage inflammatory protein 3; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (macrophage-stimulating; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Lung  
 (macrophage; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Kidney  
 (macula densa; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (mannose receptor; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (mdm-2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (membrane; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Animal cell  
 (meningotheelial; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Kidney  
 (mesangium; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Brain  
 (mesenchymal, capillary endothelial and fibroblast cells; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Lipids, biological studies  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (metabolism; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (metallothionein-IG; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Aging, animal  
Allergy  
Apparatus  
Astrocyte  
Bone  
Brain  
Bronchodilators  
Computer program  
DNA microarray technology  
Digestive tract  
Dione  
Drugs  
Eye  
Fibroblast  
Gallbladder  
Hepatitis  
Hyperplasia  
Hypertension  
Hypotension  
Immunosuppression  
Inflammation  
Intestine  
Jaundice  
Kidney  
Leukemia  
Leukocyte  
Liver  
Macrophage  
Mast cell  
Muscle  
Mutagenesis  
Necrosis  
Nucleic acid hybridization  
Oligodendrocyte  
Ovary  
Pancreas  
Plantago psyllium  
Podophyllum (plant)  
Sex  
Skin  
Spleen  
Statistical analysis  
Stomach  
Testis  
Thyroid gland  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)  
IT Proteins, specific or class  
cDNA  
mRNA  
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)  
IT Androgens  
Polyoxyalkylenes, biological studies  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); BIOL (Biological study)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT APC protein  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Androgen receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Aromatic hydrocarbon receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Biliproteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT CD14 (antigen)  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT CD44 (antigen)  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT CFTR (cystic fibrosis transmembrane conductance regulator)  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Cadherins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Caldesmon  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Calnexin  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Calreticulin  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Carcinoembryonic antigen  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Clusterin  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Cyclophilins.  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Dynamin  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Eotaxin  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Erythropoietin receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Estrogen receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Fas antigen  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Fas ligand  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Fibronectin receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Filaggrin  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Filamin  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Gelsolin  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Glucocorticoid receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Gonadotropins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Hemopexins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Hepatocyte growth factor  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Hepatocyte growth factor receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Interleukin 10  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Interleukin 12  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Interleukin 13  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Interleukin 18  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Interleukin 1 $\alpha$   
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Interleukin 1 $\beta$   
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Interleukin 2  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Interleukin 3  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Interleukin 4  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Interleukin 5  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Interleukin 6  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Interleukin 8  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Lactoferrins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Leukemia inhibitory factor  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Lymphotoxin  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Macrophage colony-stimulating factor receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Mannose receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Mdm2 protein  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Monocyte chemoattractant protein-1  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Multidrug resistance proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Myelin basic protein  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Neurofibromin  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Osteocalcins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Osteonektin  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Osteopontin  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Oxytocin receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Potassium channel  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Prion proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Probes (nucleic acid)  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Progesterone receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Proliferating cell nuclear antigen  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Prostate-specific antigen  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT RANTES (chemokine)  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Stem cell factor  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT TCR (T cell receptors)  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Tau factor  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Tenascins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Thioredoxins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Thrombin receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Thrombomodulin  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Transcortins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Transferrin receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Transferrins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Transforming growth factors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Transthyretin  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Tropoelastins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Tumor necrosis factors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Urokinase-type plasminogen activator receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Vimentins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Vitellogenins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT neu (receptor)  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT p53 (protein)  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(methods of determining individual hypersensitivity to a pharmaceutical agent  
from gene expression profile)

IT Neuroglia  
(microglia cells; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(mig-2Or; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(monocyte chemotactic protein-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(mss4; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(mtal; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(myelin basic protein; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(myeloid cell differentiation protein-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(natural killer cell-enhancing factor B; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(natural killer enhancing factor A; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(neomycin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Kidney, disease  
(nephritis; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Toxicity  
(nephrotoxicity; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Endocrine system  
(neuroendocrine system, cell; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Nerve  
(neuron; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Toxins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(neurotoxins; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Agranulocytosis  
(neutropenia; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(nucleic acid binding protein; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Animal cell  
Blood  
Blood serum  
Urine  
(nucleic acid or protein expression profile from; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(nucleic acid-binding; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(nucleoside diphosphate kinase beta isoform; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(octamer binding protein 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(oncosis associated; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(organic anion transporter 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transport proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(organic anion-transporting; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(ornithine decarboxylase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(osteopontin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(oxygen regulated protein 150; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(oxysterol binding protein; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cyclin dependent kinase inhibitors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(p16INK4; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(p190-B; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Ras proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(p21c-Ha-ras; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cyclin dependent kinase inhibitors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(p21CIP1/WAF1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cyclin dependent kinase inhibitors  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(p27KIP1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

- IT Tumor necrosis factor receptors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (p55; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (p55CDC; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Tumor necrosis factor receptors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (p75; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Pancreas, disease  
 (pancreatitis, genes associated with; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (pancreatitis-associated protein; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Insecticides  
 (pediculicides; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (penicillin band 109-A-2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (penicillin band 117-B-2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (penicillin band 134-A-2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (penicillin band 134-A-4; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (penicillin band 149-B-3; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (penicillin band 239-A-2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)  
 (penicillin band 240-A-4; methods of determining individual hypersensitivity  
 to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
 (Biological study); PROC (Process)  
 (penicillin band 244-A-2; méthods of determining individual hypersensitivity  
 to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
 (Biological study); PROC (Process)  
 (penicillin band 69-B-3; methods of determining individual hypersensitivity  
 to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
 (Biological study); PROC (Process)  
 (penicillin band 77-C-2; methods of determining individual hypersensitivity  
 to a pharmaceutical agent from gene expression profile)

IT Nerve, disease  
 to  
 (peripheral neuropathy; methods of determining individual hypersensitivity  
 a pharmaceutical agent from gene expression profile)

IT Proteoglycans, biological studies  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
 (Biological study); PROC (Process)  
 (perlecan; methods of determining individual hypersensitivity to a  
 pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
 (Biological study); PROC (Process)  
 (peroxisomal 3-oxoacyl-CoA thiolase; methods of determining individual  
 hypersensitivity to a pharmaceutical agent from gene expression  
 profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
 (Biological study); PROC (Process)  
 (peroxisomal acyl-CoA oxidase; methods of determining individual  
 hypersensitivity to a pharmaceutical agent from gene expression  
 profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
 (Biological study); PROC (Process)  
 (peroxisomal enoyl-CoA hydratase: 3-hydroxyacyl-CoA dehydrogenase;  
 methods of determining individual hypersensitivity to a pharmaceutical agent  
 from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
 (Biological study); PROC (Process)  
 (peroxisome assembly factor 1; methods of determining individual  
 hypersensitivity to a pharmaceutical agent from gene expression  
 profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
 (Biological study); PROC (Process)  
 (peroxisome assembly factor 2; methods of determining individual  
 hypersensitivity to a pharmaceutical agent from gene expression  
 profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
 (Biological study); PROC (Process)

(peroxisome assembly factor-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(peroxisome biogenesis disorder protein 11; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(peroxisome biogenesis disorder protein 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(peroxisome biogenesis disorder protein 4; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(phenol sulfotransferase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(phenylalanine hydroxylase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(phosphoenolpyruvate carboxykinase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(phosphoglycerate kinase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(phospholipase A2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Glycoproteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(plasma cell membrane; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(plasminogen activator inhibitor 2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

- IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(platelet/endothelial cell adhesion mol.-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Animal tissue  
Organ, animal  
Organelle  
(prevention or repair of toxic damage of; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Nucleotides, biological studies  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(prevention or repair of toxic damage of; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Collagens, biological studies  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(procollagens, type I, alpha 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(prohibitin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(prohibitins; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Peroxisome  
(proliferation, genes associated with; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(proline-rich; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(prostaglandin H synthase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(protein tyrosine phosphatase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, general, biological studies  
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)  
(proteinuria; methods of determining individual hypersensitivity to a

pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(prothymosin, alpha; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(psoriasisin, 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Antibiotics  
(quinolone, fluoroquinolones; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Intestine  
(rectum; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Cytokines  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(release' genes associated with; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(retinoic acid receptor gamma 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(retinol binding protein, CRBP-I (cellular retinol binding protein I); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(retinol binding protein, CRBP-II (cellular retinol binding protein II); methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Eye, disease  
(retinopathy; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(senescence marker protein-30; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Animal cell  
(serous and brush; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(silencer of death domain; methods of determining individual hypersensitivity)

to a pharmaceutical agent from gene expression profile)

IT Vein  
 (sinusoidal, hepatic venule endothelial cells; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Ribonucleoproteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (small nuclear RNA-containing, B; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Muscle  
 (smooth, cells; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Transport proteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (sodium taurocholate-cotransporting; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Hedgehog protein  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (sonic; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (spermidine/spermine N1-acetyltransferase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Disease, animal  
 (steatosis; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Liver  
 (stellate cell; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (stromelysin-1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
 Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (survivin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Phosphoproteins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (synapsins, I; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Heart, disease  
 (tachycardia; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (thiol-specific antioxidant protein; methods of determining individual

hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(thioredoxin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(thymidine kinase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(thymidylate synthase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Heart  
Kidney  
Liver  
Nerve  
(toxicity; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(transferrin receptor; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(transferrin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(transthyretin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(tryptophanyl-tRNA synthetase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(ts11 gene encoding G1 progression protein; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Lung  
(type I cell; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Activin receptors  
Collagens, biological studies  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(type II; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

- IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(ubiquitin conjugating enzyme; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Enzymes, biological studies  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(ubiquitin-conjugating, G2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Sterols  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
(unsatd., Stanol, esters; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(urokinase plasminogen activator receptor; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(vascular endothelial growth factor receptor 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(very-long-chain acyl-CoA-dehydrogenase; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(vimentin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Epithelium  
(visceral, parietal and tubular; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(visinin-like peptide; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Proteins, specific or class  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(x13694; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Gene, animal  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(zinc finger protein 37; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT Crystallins

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
   ( $\zeta$ -crystallins; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Interferons  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
   ( $\alpha$ -2b; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Tubulins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
   ( $\alpha$ -; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Thyroid hormone receptors  
 $\alpha$ 1-Acid glycoprotein  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
   ( $\alpha$ 1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Catenins  
 Integrins  
 Interferons  
 Peroxisome proliferator-activated receptors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
   ( $\alpha$ ; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Macroglobulins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
   ( $\alpha$ 2-; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Microglobulins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
   ( $\alpha$ 2-microglobulins,  $\alpha$ -2 microglobulin; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Chemokine receptors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
   ( $\beta$  chemokine receptor CCR2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Chemokine receptors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
   ( $\beta$  chemokine receptor CCR5; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Actins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
   ( $\beta$ -; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Interferons  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
   ( $\beta$ 1; methods of determining individual hypersensitivity to a

pharmaceutical agent from gene expression profile)

IT Integrins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (β1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Integrins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (β2; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Integrins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (β4; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Fibrinogens  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (γ chain; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Actins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (γ-actins; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT Interferons  
 Peroxisome proliferator-activated receptors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (γ; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 9038-14-6, Flavin containing monooxygenase  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (1 and 3; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 9059-22-7 9076-57-7, Histone deacetylase 52660-18-1 61969-98-0, Bilirubin-UDP-glucuronosyltransferase  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (1; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 9030-08-4, UDP-glucuronosyltransferase  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (2 and 2B; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 22916-47-8, Miconazole  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (2% cream; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 9037-14-3, 5-Aminolevulinate synthase  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (2, gene for; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 134678-17-4, Lamivudine  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); BIOL (Biological study)  
 (3TC; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 99011-02-6, Imiquimod  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (5% cream; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 9001-66-5  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (A and B; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 9001-60-9, Lactate dehydrogenase  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (B; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 8064-90-2, Trimeth/sulfa  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (Co-trimoxazole; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 9015-85-4  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (I and III and IV; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 9001-16-5, Cytochrome C oxidase  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (I, II and III, gene for; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 9001-03-0  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (III; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 79871-54-8, Norgestimate-ethinyl estradiol mixture  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (Norgestimate/ethinyl estradiol; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 50812-37-8, Glutathione S-transferase  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (Ya, theta-1, and alpha subunit; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 9014-08-8, Enolase  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (alpha; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 58-82-2, Bradykinin  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (antagonist; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

- IT 9001-15-4  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (b; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT 76901-00-3, Acetyl, hydrolase  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (beta subunit; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT 66722-44-9, Bisoprolol  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (bisoprolol/HCTZ; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT 9005-32-7, Alginic acid  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (collagen-alginate; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT 7440-57-5, Gold, biological studies  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (comps.; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT 9054-89-1, Superoxide dismutase  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (copper-zinc-containing and manganese-containing; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT 154248-97-2, Imiglucerase  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (injection; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT 56-81-5, Glycerol, biological studies  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (iodinated; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)
- IT 50-02-2, Dexamethasone 50-06-6, Phenobarbital, biological studies  
 50-18-0, Cyclophosphamide 50-23-7, Hydrocortisone 50-24-8,  
 Prednisolone 50-28-2, Estradiol, biological studies 50-44-2,  
 6-Thiopurine 50-48-6, Amitriptyline 50-55-5, Reserpine 50-76-0,  
 Actinomycin D 50-78-2, Aspirin 51-06-9, Procainamide 51-21-8,  
 Fluorouracil 51-34-3, Scopolamine 51-48-9, Levothyroxine, biological studies 51-49-0, Dextrothyroxine 51-55-8, Atropine, biological studies 51-75-2, Mechlorethamine 52-01-7, Spironolactone 52-53-9, Verapamil 52-67-5, Penicillamine 52-86-8, Haloperidol 53-03-2, Prednisone 53-06-5, Cortisone 53-19-0, Mitotane 53-33-8, Paramethasone 53-86-1, Indometheacin 54-05-7, Chloroquine 54-11-5, Nicotine 54-31-9, Furosemide 54-36-4, Metyrapone 54-85-3, Isoniazid 55-63-0, Nitroglycerin 55-65-2, Guanethidine 55-98-1, Busulfan 56-54-2, Quinidine 56-75-7, Chloramphenicol 57-22-7, Vincristine 57-41-0, Phenytoin 57-53-4, Meprobamate 57-63-6, Ethinyl estradiol 57-66-9, Probenecid 57-83-0, Progestin, biological studies 57-96-5, Sulfinpyrazone 58-05-9, Leucovorin 58-14-0, Pyrimethamine 58-32-2, Dipyridamole 58-39-9, Perphenazine 58-54-8, Ethacrynic acid 58-55-9,

Theophylline, biological studies 58-61-7, Adenosine, biological studies 58-74-2, Papaverine 58-93-5, Hydrochlorothiazide 58-94-6, Thiazide 59-05-2, Methotrexate 59-42-7, Phenylephrine 59-43-8, Thiamine, biological studies 59-92-7, Levodopa, biological studies 59-99-4, Neostigmine 60-40-2, Mecamylamine 60-54-8, Tetracycline 60-79-7, Ergonovine 60-87-7, Promethazine 61-32-5, Methicillin 61-72-3, Cloxacillin 64-75-5, Tetracycline hydrochloride 64-77-7, Tolbutamide 64-86-8, Colchicine 65-23-6, Pyridoxine 66-79-5, Oxacillin 66-97-7, Psoralen 67-20-9, Nitrofurantoin 67-45-8, Furazolidone 67-68-5, Dimethyl sulfoxide, biological studies 68-22-4D, Norethindrone, mixture with ethinyl estradiol 68-41-7, Cycloserine 68-88-2, Hydroxyzine 69-53-4, Ampicillin 69-72-7, biological studies 69-89-6, Xanthine 73-24-5, 6-Aminopurine, biological studies 73-31-4, Melatonin 76-42-6, Oxycodone 76-57-3, Codeine 77-09-8, Phenolphthalein 77-19-0, Dicyclomine 77-36-1, Chlorthalidone 78-44-4, Carisoprodol 80-08-0, Dapsone 81-23-2, Dehydrocholic acid 81-81-2, Warfarin 82-92-8, Cyclizine 82-95-1, Buclizine 83-43-2, Methylprednisolone 83-73-8, Iodoquinol 83-89-6, Quinacrine 83-98-7, Orphenadrine 86-54-4, Hydralazine 89-57-6, Mesalamine 90-34-6, Primaquine 90-82-4, Pseudoephedrine 91-64-5, Coumarin 92-13-7, Pilocarpine 92-84-2, Phenothiazine 93-14-1, Guaifenesin 94-20-2, Chlorpropamide 94-36-0, Benzoyl peroxide, biological studies 94-78-0, Phenazopyridine 95-25-0, Chlorzoxazone 96-64-0, Soman 97-77-8, Disulfiram 99-66-1, Valproic acid 100-33-4, Pentamidine 100-97-0, Methenamine, biological studies 101-31-5, Hyoscyamine 103-90-2, Acetaminophen 113-18-8, Ethchlorvynol 113-42-8, Methylergonovine 113-45-1, Methylphenidate 114-07-8, Erythromycin 114-86-3, Phenformin 118-42-3, Hydroxychloroquine 122-09-8, Phentermine 123-56-8, Succinimide 123-63-7, Paraldehyde 124-94-7, Triamcinolone 125-29-1, Hydrocodone 125-33-7, Primidone 125-64-4, Methyprylon 125-71-3, Dextromethorphan 125-84-8, Aminoglutethimide 126-07-8, Griseofulvin 126-52-3, Ethinamate 127-07-1, Hydroxyurea 127-69-5, Sulfisoxazole 128-13-2, Ursodiol 130-95-0, Quinine 132-17-2, Benztropine 133-10-8, Sodium p-aminosalicylate 137-58-6, Lidocaine 138-56-7, Trimethobenzamide 144-11-6, Trihexyphenidyl 147-52-4, Nafcillin 147-94-4, AraC 148-82-3, Melphalan 154-21-2, Lincomycin 154-42-7, Thioguanine 154-93-8, Carmustine 155-97-5, Pyridostigmine 298-46-4, 5H-Dibenz[b,f]azepine-5-carboxamide 298-50-0, Propantheline 299-42-3, Ephedrine 300-62-9D, Amphetamine, mixed 300-62-9D, Amphetamine, mixed salts 302-17-0, Chloral hydrate 302-79-4, Tretinoin 303-53-7, Cyclobenzaprine 305-03-3, Chlorambucil 315-30-0, Allopurinol 321-64-2, Tacrine 346-18-9, Polythiazide 361-37-5, Methysergide 363-24-6, Dinoprostone 364-62-5, Metoclopramide 378-44-9, Betamethasone 389-08-2, Nalidixic acid 395-28-8, Isoxsuprime 439-14-5, Diazepam 443-48-1, Metronidazole 446-86-6, Azathioprine 456-59-7, Cyclandelate 461-72-3, Hydantoin 463-04-7, Amyl nitrite 469-62-5, Propoxyphene 474-25-9, Chenodiol 480-30-8, Dichloralphenazone 484-23-1, Dihydralazine 503-01-5, Isometheptene 512-15-2, Cyclopentolate 520-85-4, Medroxyprogesterone 525-66-6, Propranolol 526-36-3, Xylometazoline 536-33-4, Ethionamide 541-15-1, Levocarnitine 546-88-3, Acetohydroxamic acid 555-30-6, Methyl dopa 564-25-0, Doxycycline 569-65-3, Meclizine 577-11-7, Docusate sodium 596-51-0, Glycopyrrolate 599-79-1, Sulfasalazine 603-50-9, Bisacodyl 634-03-7, Phendimetrazine 637-07-0, Clofibrate 657-24-9, Metformin 671-16-9, Procarbazine 672-87-7, Metyrosine 674-38-4, Bethanechol 723-46-6, Sulfamethoxazole 738-70-5, Trimethoprim 745-65-3, Alprostadil 791-35-5, Chlophedianol 797-63-7, Levonorgestrel 797-64-8D, L-Norgestrel, ethinyl estradiol mixture 846-49-1, Lorazepam 846-50-4, Temazepam 911-45-5, Clomiphene 915-30-0, Diphenoxylate 962-58-3, Diazoxon 968-93-4, Testolactone 972-02-1, Diphenidol

990-73-8, Fentanyl citrate 1134-47-0, Baclofen 1143-38-0, Anthralin 1321-13-7, Potassium aminobenzoate 1397-89-3, Amphotericin B 1400-61-9, Nystatin 1404-04-2, Neomycin 1404-04-2D, Neomycin, mixture with polymyx/HC 1404-90-6, Vancomycin 1406-05-9, Penicillin 1491-59-4, Oxymetazoline 1622-61-3, Clonazepam 1953-02-2, Tiopronin 1977-10-2, Loxapine 2152-34-3, Pemoline 2152-44-5, Betamethasone valerate 2447-57-6, Sulfadoxine 2451-01-6, Terpin hydrate 2609-46-3, Amiloride 2809-21-4 2998-57-4, Estramustine 3116-76-5, Dicloxacillin 3313-26-6, Thiothixene 3385-03-3, Flunisolide 3485-14-1, Cyclacillin 3737-09-5, Disopyramide

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(methods of determining individual hypersensitivity to a pharmaceutical agent

from gene expression profile)

IT 3778-73-2, Iphosphamide 3930-20-9, Sotalol 4205-90-7, Clonidine 4419-39-0, Beclomethasone 4499-40-5, Oxtriphylline, biological studies 4618-18-2, Lactulose 4697-36-3, Carbenicillin 4759-48-2, Isotretinoin 5051-62-7, Guanabenz 5543-57-7, (s)-Warfarin 5633-20-5, Oxybutynin 5786-21-0, Clozapine 6190-39-2, Dihydroergotamine mesylate 6493-05-6, Pentoxifylline 6621-47-2, Perhexiline 7020-55-5, Clidinium 7235-40-7, Beta carotene 7261-97-4, Dantrolene 7416-34-4, Molindone 7439-93-2, Lithium, biological studies 7447-40-7, Potassium chloride, biological studies 7481-89-2, Zalcitabine 7487-88-9, Magnesium sulfate, biological studies 7648-98-8, Ambenonium 7681-11-0, Potassium iodide, biological studies 7681-93-8, Natamycin 7683-59-2, Isoproterenol 8029-99-0, Paregoric 8049-47-6, Pancreatin 8050-81-5, Simethicone 8063-07-8, Kanamycin 8067-24-1, Ergoloid mesylates 9001-27-8, Blood-coagulation factor VIII 9001-75-6, Pepsin 9004-10-8, Insulin, biological studies 9004-67-5, Methyl cellulose 9005-49-6, Enoxaparin, biological studies 9007-92-5, Glucagon, biological studies 9039-53-6, Urokinase 9046-56-4, Ancrod 10118-90-8, Minocycline 10238-21-8, Glyburide 10262-69-8, Maprotiline 10540-29-1, Tamoxifen 11041-12-6, Cholestyramine 11056-06-7, Bleomycin 11111-12-9, Cephalosporin 12174-11-7, Attapulgite 12244-57-4, Gold sodium thiomalate 12650-69-0, Mupirocin 12794-10-4D, Benzodiazepine, derivs. 13010-47-4, Lomustine 13292-46-1, Rifampin 13311-84-7, Flutamide 13392-28-4, Rimantadine 13647-35-3, Trilostane 14028-44-5, Amoxapine 14124-50-6 14611-51-9, Selegiline 14769-73-4, Levamisole 14838-15-4, Phenylpropanolamine 14882-18-9, Bismuth subsalicylate 15301-69-6, Flavoxate 15307-86-5, Diclofenac 15663-27-1, Cisplatin 15686-71-2, Cephalexin 15687-27-1, Ibuprofen 15722-48-2, Olsalazine 16051-77-7, Isosorbide mononitrate 16068-46-5, Potassium phosphate 16110-51-3, Cromolyn 16590-41-3, Naltrexone 16679-58-6, Desmopressin 17230-88-5, Danazol 17784-12-2, Sulfacytine 18323-44-9, Clindamycin 18559-94-9, Albuterol 18883-66-4, Streptozocin 19216-56-9, Prazosin 19794-93-5, Trazodone 20537-88-6, Amifostine 20830-75-5, Digoxin 20830-81-3, Daunomycin 21256-18-8, Oxaprozin 21829-25-4, Nifedipine 22204-53-1, Naproxen 22232-71-9, Mazindol 23031-32-5, Terbutaline sulfate 23214-92-8, Doxorubicin 23288-49-5, Probucon 25322-68-3, Polyethylene glycol 25451-15-4, Felbamate 25614-03-3, Bromocriptine 25812-30-0, Gemfibrozil 26652-09-5, Ritodrine 26787-78-0, Amoxicillin 26807-65-8, Indapamide 26839-75-8, Timolol 27203-92-5, Tramadol 27262-47-1, Levobupivacaine 27686-84-6, Masoprocol 28395-03-1, Bumetanide 28657-80-9, Cinoxacin 28782-42-5, Difenoxin 28860-95-9, Carbidopa 28911-01-5, Triazolam 28981-97-7, Alprazolam 29094-61-9, Glipizide 29110-47-2, Guanfacine 29122-68-7, Atenolol 30516-87-1, Zidovudine 31441-78-8, Mercaptopurine 31677-93-7, Bupropion hydrochloride 31828-71-4, Mexiletine 31883-05-3, Moricizine 32986-56-4, Tobramycin 33069-62-4, Paclitaxel 33419-42-0, Etoposide

34089-81-1, Sodium ferric gluconate 35189-28-7, Norgestimate  
 36322-90-4, Piroxicam 36505-84-7, Buspirone 36791-04-5, Ribavirin  
 38304-91-5, Minoxidil 40180-04-9, Tienilic acid 40580-59-4, Guanadrel  
 41575-94-4, Carboplatin 41708-72-9, Tocainide 42399-41-7, Diltiazem  
 42924-53-8, Nabumetone 49562-28-9, Fenofibrate 50679-08-8, Terfenadine  
 50925-79-6, Colestipol 50972-17-3, Bacampicillin 51022-71-0, Nabilone  
 51110-01-1, Somatostatin 51333-22-3, Budesonide 51384-51-1, Metoprolol  
 51481-61-9, Cimetidine 53179-11-6, Loperamide 53230-10-7, Mefloquine  
 53608-75-6, Pancrélipase 53714-56-0, Leuprolide 53994-73-3, Cefaclor  
 54024-22-5, Desogestrel 54063-53-5, Propafenone 54143-56-5, Flecainide  
 acetate 54182-58-0, Sucralfate 54350-48-0, Etretinate 54573-75-0,  
 Doxercalciferol 54910-89-3, Fluoxetine 55142-85-3, Ticlopidine  
 55268-75-2, Cefuroxime 55985-32-5, Nicardipine 56420-45-2, Epirubicin  
 58001-44-8 58581-89-8, Azelastine 59122-46-2, Misoprostol  
 59277-89-3, Acyclovir 59729-33-8, Citalopram 59865-13-3, Cyclosporine  
 A 60142-96-3, Gabapentin 60205-81-4, Ipratropium 61489-71-2,  
 Menotropin 61718-82-9, Fluvoxamine maleate 61869-08-7, Paroxetine  
 62571-86-2, Captopril 63585-09-1, Foscarnet sodium 63590-64-7,  
 Terazosin 64952-97-2, Latamoxef 65141-46-0, Nicorandil 65277-42-1,  
 Ketoconazole 66085-59-4, Nimodipine 66104-22-1, Pergolide  
 66357-35-5, Ranitidine 66376-36-1, Alendronate 67227-57-0, Fenoldopam  
 mesylate 68475-42-3, Anagrelide 68844-77-9, Astemizole 69049-73-6,  
 Nedocromil 69123-98-4, Fialuridine 69655-05-6, Didanosine  
 70359-46-5, Brominide tartrate 70989-04-7, S-Mephenytoin 71320-77-9,  
 Moclobemide 72432-03-2, Miglitol 72509-76-3, Felodipine 72956-09-3,  
 Carvedilol 73590-58-6, Omeprazole 74103-06-3, Kеторолак 74191-85-8,  
 Doxazosin 75330-75-5, Lovastatin 75695-93-1, Isradipine 75706-12-6,  
 Leflunomide 75847-73-3, Enalapril 76470-66-1, Loracarbef 76547-98-3,  
 Lisinopril 76568-02-0, Flosequinan 76584-70-8 76824-35-6, Famotidine  
 76932-56-4, Nafarelin 76963-41-2, Nizatidine 78110-38-0, Aztreonam  
 78628-80-5, Terbinafine hydrochloride 79516-68-0, Levocabastine  
 79617-96-2, Sertraline 79794-75-5, Loratadine 79902-63-9, Simvastatin  
 80125-14-0, Remoxipride 80474-14-2, Fluticasone propionate 81093-37-0,  
 Pravastatin 81098-60-4, Cisapride 81103-11-9, Clarithromycin  
 81669-57-0, Anistreplase 82410-32-0, Ganciclovir 82419-36-1, Ofloxacin  
 82626-48-0, Zolpidem 82834-16-0, Perindopril 83366-66-9, Nefazodone  
 83799-24-0, Fexofenadine 83881-51-0, Cetirizine 83905-01-5,  
 Azithromycin 84057-84-1, Lamotrigine 84449-90-1, Raloxifene  
 84625-61-6, Itraconazole 85441-61-8, Quinapril 85721-33-1,  
 Ciprofloxacin 86386-73-4, Fluconazole 86541-75-5, Benazepril  
 87333-19-5, Ramipril 87679-37-6, Trandolapril 88040-23-7, Cefepime  
 88150-42-9, Amlodipine 89365-50-4, Salmeterol 89778-26-7, Toremifene  
 90566-53-3, Fluticasone 91714-94-2, Bromfenac  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
 study, unclassified); BIOL (Biological study)  
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IT 92665-29-7, Cefprozil 93390-81-9, Fosphenytoin 93413-69-5, Venlafaxine  
 93479-97-1, Glimepiride 93957-54-1, Fluvastatin 95058-81-4,  
 Gemcitabine 95233-18-4, Atovaquone 96036-03-2, Meropenem 97322-87-7,  
 Troglitazone 97519-39-6, Ceftibuten 97534-21-9, Merbarone  
 97682-44-5, Irinotecan 98048-97-6, Fosinopril 98319-26-7, Finasteride  
 100986-85-4, Levofloxacin 102767-28-2, Levetiracetam 103577-45-3,  
 Lansoprazole 103628-46-2, Sumatriptan 104227-87-4, Famciclovir  
 104632-26-0, Pramipexole 105102-22-5, Mometasone 105462-24-6  
 105857-23-6, Alteplase 106133-20-4, Tamsulosin 106266-06-2,  
 Risperidone 106392-12-5, Poloxamer 188 106650-56-0, Sibutramine  
 107753-78-6, Zafirlukast 107868-30-4, Exemestane 109889-09-0,  
 Granisetron 111025-46-8, Pioglitazone 112809-51-5, Letrozole

112965-21-6, Calcipotriene 114798-26-4, Losartan 115103-54-3,  
 Tiagabine 115956-13-3, Dolasetron mesylate 116644-53-2, Mibepradil  
 117976-89-3, Rabeprazole 119383-00-5 119914-60-2, Grepafloxacin  
 120014-06-4, Donepezil 121679-13-8, Naratriptan 122320-73-4,  
 Rosiglitazone 122647-32-9, Ibutilide fumarate 122852-42-0, Alosetron  
 123948-87-8, Topotecan 124937-51-5, Tolterodine 126040-58-2, Calcium  
 polycarbophil 127779-20-8, Saquinavir 129311-55-3, Ganirelix acetate  
 129318-43-0, Alendronate sodium 129618-40-2, Navirapine 130209-82-4,  
 Latanoprost 130929-57-6, Entacapone 134308-13-7, Tolcapone  
 134523-00-5, Atorvastatin 137862-53-4, Valsartan 138402-11-6,  
 Irbesartan 143003-46-7, Alglucerase 144494-65-5, Tirofiban  
 144701-48-4, Telmisartan 145599-86-6, Cerivastatin 147059-72-1,  
 Trovafloxacin 147245-92-9, Copolymer 1 150378-17-9, Indinavir  
 151096-09-2, Moxifloxacin 161814-49-9, Amprenavir 169590-42-5,  
 Celecoxib 171599-83-0, Sildenafil citrate 172820-23-4, Pexiganan  
 acetate 180288-69-1, Trastuzumab 185243-69-0, Etanercept  
 188627-80-7, Eptifibatide 339524-26-4, Amiodorone 339524-30-0,  
 Cycloepic 339524-35-5, Cytoxin 339524-50-4, Hyperozia  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
 study, unclassified); BIOL (Biological study)  
 (methods of determining individual hypersensitivity to a pharmaceutical  
 agent

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IT 107-97-1, Sarcosin 447-41-6, Nylidrin 8056-51-7 9000-86-6, Alanine  
 aminotransferase 9000-97-9 9001-05-2, Catalase 9001-40-5,  
 Glucose-6-phosphate dehydrogenase 9001-48-3, Glutathione reductase  
 9001-50-7, Glyceraldehyde 3-phosphate dehydrogenase 9001-62-1, Hepatic  
 lipase 9001-84-7, Phospholipase A2 9002-03-3, Dihydrofolate reductase  
 9002-06-6, Thymidine kinase 9002-12-4, Urate oxidase 9002-67-9,  
 Luteinizing hormone 9003-99-0, Myeloperoxidase 9012-25-3,  
 Catechol-O-methyltransferase 9012-38-8, PAPS synthetase 9012-39-9  
 9012-52-6, S-Adenosylmethionine synthetase 9013-08-5,  
 Phosphoenolpyruvate carboxykinase 9013-18-7, Fatty acyl-CoA synthetase  
 9013-38-1, Dopamine  $\beta$ -hydroxylase 9013-66-5, Glutathione peroxidase  
 9013-79-0, Neuropathy target esterase 9014-55-5, Tyrosine  
 aminotransferase 9015-71-8, Corticotropin releasing hormone 9015-81-0,  
 17- $\beta$  Hydroxysteroid dehydrogenase 9016-12-0, Hypoxanthine-guanine  
 phosphoribosyltransferase 9023-44-3, Tryptophanyl-tRNA synthetase  
 9023-62-5, Glutathione synthetase 9023-64-7,  $\gamma$ -Glutamylcysteinyl  
 synthetase 9023-70-5, Glutamine synthetase 9024-60-6, Ornithine  
 decarboxylase 9024-61-7, Histidine decarboxylase 9025-32-5, Prolidase  
 9026-00-0, Cholesterol esterase 9026-09-9, Phenol sulfotransferase  
 9026-43-1, Serine kinase 9026-51-1, Nucleoside diphosphate kinase  
 9027-13-8, Enoyl-CoA hydratase 9027-65-0, Acyl-CoA dehydrogenase  
 9028-06-2 9028-31-3, Aldose reductase 9028-35-7, HMG CoA reductase  
 9028-41-5, Hydroxyacyl-Coenzyme A dehydrogenase 9028-86-8, Aldehyde  
 dehydrogenase 9029-73-6, Phenyl alanine hydroxylase 9029-80-5,  
 Histamine N-methyltransferase 9029-97-4, 3-Ketoacyl-CoA thiolase  
 9031-37-2, Ceruloplasmin 9031-54-3, Sphingomyelinase 9031-61-2,  
 Thymidylate synthase 9031-72-5, Alcohol dehydrogenase 9032-20-6,  
 DT-Diaphorase 9032-76-2 9035-58-9, Blood-coagulation factor III  
 9036-22-0, Tyrosine hydroxylase 9037-21-2, Tryptophan hydroxylase  
 9037-62-1, Glycyl tRNA synthetase 9039-06-9, NADPH cytochrome P450  
 reductase 9040-57-7, Ribonucleotide reductase 9041-92-3 9045-77-6,  
 Fatty acid synthase 9046-27-9,  $\gamma$ -Glutamyl transpeptidase  
 9048-63-9, Epoxide hydrolase 9055-67-8, Poly(ADP-ribose)polymerase  
 9059-25-0, Lysyl oxidase 9068-41-1, Carnitine palmitoyltransferase  
 9074-02-6, Malic enzyme 9074-10-6, Biliverdin reductase 9074-19-5,  
 Hydratase 9074-87-7,  $\gamma$ -Glutamyl hydrolase 9081-36-1,  
 25-Hydroxyvitamin D3 1-hydroxylase 11096-26-7, Erythropoietin

37205-63-3, ATP synthase 37237-44-8, Glucosylceramide synthase  
 37289-06-8, Acid ceramidase 37292-81-2, Cytochrome p 450 11A1  
 37318-49-3, Protein disulfide isomerase 39391-18-9, Prostaglandin H  
 synthase 56093-23-3,  $\alpha$ -1,2-Fucosyl transferase 56645-49-9,  
 Cathepsin G 59536-73-1, Phosphomannomutase 59536-74-2, Very long-chain  
 acyl-CoA dehydrogenase 60267-61-0, Ubiquitin 60616-82-2, Cathepsin L  
 61116-22-1, Fatty acyl-CoA oxidase 62229-50-9, Epidermal growth factor  
 67339-09-7, Thiopurine methyltransferase 67763-96-6, Insulin-like growth  
 factor 1 67763-97-7, Insulin-like growth factor II 77271-19-3,  
 6-O-Methylguanine-DNA methyltransferase 77847-96-2, Prostacyclin-  
 stimulating factor 79747-53-8, Protein tyrosine phosphatase  
 79955-99-0, Stromelysin-1 80146-85-6, Tissue Transglutaminase  
 80295-41-6, Complement component C3 81627-83-0, Colony stimulating  
 factor -1 82391-43-3, 12-Lipoxygenase 83268-44-4 83869-56-1,  
 Granulocyte-macrophage colony-stimulating factor 85637-73-6, Atrial  
 natriuretic factor 87397-91-9, Thymosin  $\beta$ 10 88943-21-9,  
 Proteinase  $\alpha$ 1-inhibitor III 89964-14-7, Prothymosin, alpha  
 90698-26-3, Ribosomal protein S6 kinase 96024-44-1, Granulin  
 105238-46-8, Macropain 106096-92-8, Fibroblast growth factor, acidic  
 106956-32-5, Oncostatin M 112130-98-0, Procathepsin L 114949-22-3,  
 Activin (protein) 117698-12-1, Paraoxonase 119418-04-1, Galanin  
 122191-40-6, Caspase-1 123626-67-5, Endothelin-1 125978-95-2, Nitric  
 oxide synthase 127464-60-2, Vascular endothelial growth factor  
 137632-07-6, Extracellular-signal-regulated kinase 1 138238-81-0,  
 Endothelin converting enzyme-1 140208-24-8, Tissue inhibitor of  
 metalloproteinase-1 141176-92-3 141349-86-2, Cyclin dependent kinase 2  
 141436-78-4, Protein kinase C 142243-03-6, Plasminogen activator  
 inhibitor 2 142805-56-9, DNA topoisomerase II 142805-58-1, MAP kinase  
 kinase 143180-75-0, DNA topoisomerase I 143375-65-9, Cyclin dependent  
 kinase 1 145809-21-8, Tissue inhibitor of metalloproteinase-3  
 146480-35-5, Matrix metalloproteinase-2 147014-97-9, Cyclin dependent  
 kinase 4 148348-15-6, Fibroblast growth factor 7 149316-81-4, Branched  
 chain acyl-CoA oxidase 149371-05-1, Kinase (phosphorylating), gene c-abl  
 protein 149885-78-9, Hepatocyte growth factor activator 154907-65-0,  
 Checkpoint kinase 155807-64-0, FEN-1 Endonuclease 165245-96-5, p38  
 Mitogen-activated protein kinase 169592-56-7, CPP32 proteinase  
 179241-70-4, Protein kinase ZPK 179241-78-2, Caspase 8 182372-14-1,  
 Caspase 2 182372-15-2, Caspase 6 182762-08-9, Caspase 4 189258-14-8,  
 Caspase 7 192465-11-5, Caspase 5 193363-12-1, Vascular endothelial  
 growth factor D 194554-71-7, Tissue factor pathway inhibitor  
 205944-50-9, Osteoprotegerin 220983-94-8, Sorbitol dehydrogenase  
 289898-51-7, JNK1 protein kinase 303752-61-6, DNA dependent protein  
 kinase 329736-03-0, Cytochrome p450 3A4 329764-85-4, Cytochrome p450  
 1A1 329900-75-6, Cyclooxygenase 2 329978-01-0, Cytochrome p450 2C9  
 330196-64-0, Cytochrome p450 1A2 330196-93-5, Cytochrome p450 2E1  
 330207-10-8, Cytochrome p450 2B1 330589-90-7, Cytochrome p450 2C19  
 330596-22-0, Cytochrome p450 1B1 330597-62-1, Cytochrome p450 2D6  
 330975-22-9, Macrostatin 331462-97-6, Cytochrome p450 2B2 331462-98-7,  
 Cytochrome p450 3A1 331823-00-8, Cytochrome p450 2C11 331823-12-2,  
 Cytochrome p450 2C12 331823-27-9, Cytochrome p450 2A1 331827-06-6,  
 Cytochrome p450 2A6 332847-52-6, Cytochrome p450 4A 336884-26-5,  
 Cytochrome p450 2B10 338964-08-2, P 450 17A 338969-62-3, P 450 2A3  
 338969-69-0, P 450 2F2 338969-71-4, P 450 4A1  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
 (Biological study); PROC (Process)  
 (methods of determining individual hypersensitivity to a pharmaceutical  
 agent

from gene expression profile)

IT 9004-02-8, Lipoprotein lipase

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)  
 (precursor; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 80449-02-1, Tyrosine protein kinase  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (receptor; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 9000-83-3, ATPase  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (subunit 6; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 9025-75-6  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (subunit B; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 9079-67-8, NADH oxidoreductase  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (subunit MWFE, gene for; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 9041-46-7  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (type II; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 9001-12-1, Collagenase  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (type-1 interstitial; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

a

IT 60382-71-0, Diacylglycerol kinase  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (zeta; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 9012-90-2  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 ( $\alpha$  and  $\beta$ ; methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile)

L20 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2000:497272 HCAPLUS  
 DN 134:99209  
 ED Entered STN: 24 Jul 2000  
 TI Immunoreceptor tyrosine-based inhibitory motifs on activating molecules  
 AU Sinclair, Nicholas R. StC.  
 CS Department of Microbiology and Immunology, The University of Western Ontario, London, ON, N6A 5C1, Can.  
 SO Critical Reviews in Immunology (2000), 20(2), 89-102  
 CODEN: CCRIDE; ISSN: 1040-8401  
 PB Begell House, Inc.  
 DT Journal; General Review  
 LA English  
 CC 15-0 (Immunochemistry)

AB A review with 76 refs. Immunoreceptor tyrosine-based inhibitory motifs (ITIMs) have the restricted consensus sequence V/I/xYxxL/V, but may be more broadly defined by the sequence V/I/L/SxYxxL/V/I/S. If one includes the ITIM of CTLA-4, then the sequence becomes ψxYxxψ, where ψ represents amino acids with nonpolar side chains. Aside from their presence in various inhibitory mols., ITIMs are also found on many activating receptors and pathways. ITIMs with the restricted consensus sequence occur on IL-4R $\alpha$ , IL-3R $\beta$  type II, gp130 cytokineR, OB-R (leptinR), LIF-R $\beta$  TNF-RI, G-CSF-R, PDGF-R, Blk, Ctk/Ntk, Lsk, Zap-70, PKB/RAC $\alpha$ , PKC- $\alpha$ , PKC- $\beta$ , PKC- $\gamma$ , PKC- $\delta$ , PKC- $\xi$ , PKC- $\epsilon$ , PKC- $\eta$ , PKC- $\Phi$ , PKC- $\mu$ , calmodulin-dependent kinase II $\delta$ , SLP-76-associated protein, FYN-binding protein, Shc binding protein, RasGRF2, CDC25 homolog, Jak2, Jak3, PLC $\beta$ 1, and PLC $\beta$ 3. If ITIMs are defined by a broader consensus sequence, the list of ITIMs on activating mols. becomes even larger. In some instances, these ITIMs have been shown to associate with inhibitory phosphatases. Whether these ITIMs on activating receptors/pathways are necessary and sufficient for neg. control of activating events and for immunol. tolerance is not yet known. In some instances, ITIMs on co-inhibitory receptors are also required for appropriate neg. regulation. By studying events leading to neg. control during activation and to immune tolerance, it should be possible to discern the balance between antigen receptor-based neg. events and co-inhibition.

ST ITIM inhibitory motif activating mol review

IT Protein motifs

(ITIM; immunoreceptor tyrosine-based inhibitory motifs on activating mols.)

IT Antigens

Receptors

RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)

(activating; immunoreceptor tyrosine-based inhibitory motifs on activating mols.)

IT Immune tolerance

Signal transduction, biological

(immunoreceptor tyrosine-based inhibitory motifs on activating mols.)

RE.CNT 76 THERE ARE 76 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Adachi, M; Oncogene 1997, V14, P1629 HCPLUS
- (2) Adachi, T; Am J Physiol 1998, V275, PC623 HCPLUS
- (3) Anderson, C; Clin Exp Immunol 1997, V109, P473 HCPLUS
- (4) Anderson, C; Crit Rev Immunol 1998, V18, P525 HCPLUS
- (5) Aragane, Y; Proc Natl Acad Sci USA 1997, V94, P11490 HCPLUS
- (6) Blery, M; Clin Chem Lab Med 1999, V37, P187 HCPLUS
- (7) Bolland, S; Adv Immunol 1999, V72, P149 HCPLUS
- (8) Boussiotis, V; Science 1997, V278, P124 HCPLUS
- (9) Bretscher, P; Science 1970, V169, P1042 HCPLUS
- (10) Cambier, J; Curr Top Microbiol Immunol 1999, V244, P43 HCPLUS
- (11) Coggeshall, K; Curr Opin Immunol 1998, V10, P306 HCPLUS
- (12) Coggeshall, K; Curr Top Microbiol Immunol 2000, V245(1), P213 HCPLUS
- (13) Cornall, R; Curr Top Microbiol Immunol 1999, V244, P57 HCPLUS
- (14) Daeron, M; Annu Rev Immunol 1997, V15, P203 HCPLUS
- (15) Dahia, P; Hum Mol Genet 1999, V8, P185 HCPLUS
- (16) Duff, J; J Invest Dermatol 1997, V108, P295 HCPLUS
- (17) Famiglietti, S; Immunol Lett 1999, V68, P35 HCPLUS
- (18) Flaswinkel, H; Semin Immunol 1995, V7, P21 HCPLUS
- (19) Gadina, M; J Immunol 1999, V162, P2081 HCPLUS
- (20) Genestier, L; J Exp Med 1999, V189, P231 HCPLUS

- (21) Gergely, J; Immunol Lett 1999, V68, P3 HCAPLUS  
(22) Haque, S; J Biol Chem 1998, V273, P33893 HCAPLUS  
(23) Healy, J; Annu Rev Immunol, 1998 1998, V16, P645 HCAPLUS  
(24) Hirano, T; Int Rev Immunol 1998, V16, P249 HCAPLUS  
(25) Huber, M; EMBO J 1998, V17, P7311 HCAPLUS  
(26) Hutchcroft, J; J Immunol 1998, V161, P4506 HCAPLUS  
(27) Igarashi, K; Biochem Biophys Res Commun 1998, V246, P95 HCAPLUS  
(28) Imani, F; J Biol Chem 1997, V272, P7927 HCAPLUS  
(29) Janeway, C; Immunobiology: The Immune System in Health and Disease, 4th ed 1999  
(30) Jiao, H; Mol Cell Biol 1996, V16, P6985 HCAPLUS  
(31) Jin, Y; J Immunol 1998, V161, P1743 HCAPLUS  
(32) Jin, Y; J Immunol 1998, V161, P1743 HCAPLUS  
(33) Kim, H; Mol Cell Biol 1998, V18, P1525 HCAPLUS  
(34) Kim, S; Oncogene 1998, V16, P89 HCAPLUS  
(35) Kim, S; Oncogene 1998, V16, P89 HCAPLUS  
(36) Klaus, S; Mol Immunol 1993, V30, P1553 HCAPLUS  
(37) Klingmuller, U; Cell 1995, V80, P729 MEDLINE  
(38) Lee, J; J Immunol 1998, V161, P1637 HCAPLUS  
(39) Liu, H; J Immunol 1999, V163, P599 HCAPLUS  
(40) Long, E; Annu Rev Immunol 1999, V17, P875 HCAPLUS  
(41) Maehama, T; J Biol Chem 1998, V273, P13375 HCAPLUS  
(42) Maehama, T; J Biol Chem 1998, V273, P13375 HCAPLUS  
(43) Massa, P; Interferon Cytokine Res 1998, V18, P499 HCAPLUS  
(44) Matsuguchi, T; J Biol Chem 1998, V273, P19411 HCAPLUS  
(45) Matzinger, P; Annu Rev Immunol 1994, V12, P991 MEDLINE  
(46) Migone, T; Proc Natl Acad Sci USA 1998, V95, P3845 HCAPLUS  
(47) Miyamoto, A; Immunol Lett 1998, V63, P75 HCAPLUS  
(48) Nelms, K; Annu Rev Immunol 1999, V17, P701 HCAPLUS  
(49) Nelms, K; Immunity 1998, V9, P13 HCAPLUS  
(50) O'Garra, A; Proc Natl Acad Sci USA 1987, V84, P6254 HCAPLUS  
(51) Phillips, N; J Immunol 1988, V141, P4243 HCAPLUS  
(52) Pingel, S; J Exp Med 1999, V189, P1111 HCAPLUS  
(53) Plas, D; Science 1996, V272, P1173 HCAPLUS  
(54) Rathmell, J; Cell 1996, V87, P319 HCAPLUS  
(55) Ravetch, J; Annu Rev Immunol 1991, V9, P457 HCAPLUS  
(56) Salojin, K; J Immunol 1999, V163, P844 HCAPLUS  
(57) Schwartz, R; Cold Spr Harb Symp Quant Biol 1989, V54, P605 HCAPLUS  
(58) Sinclair, N; Adv Exp Med Biol 1971, V12, P609  
(59) Sinclair, N; Cell Immunol 1987, V107, P465 MEDLINE  
(60) Sinclair, N; Life Sci 1993, V52, P1985 HCAPLUS  
(61) Sinclair, N; Nature 1971, V234, P104 HCAPLUS  
(62) Sinclair, N; Scand J Immunol 1996, V43, P597 HCAPLUS  
(63) Tabrizi, M; Leukemia 1998, V12, P200. MEDLINE  
(64) Tsubata, T; Curr Opin Immunol 1999, V11, P249 HCAPLUS  
(65) Tsuchida, M; Eur J Immunol 1999, V29, P2354 HCAPLUS  
(66) Tsuchida, M; J Biol Chem 1999, V274, P6735 HCAPLUS  
(67) Tuosto, L; Eur J Immunol 1998, V28, P2131 HCAPLUS  
(68) van Zant, G; Exp Hematol 1989, V17, P81 MEDLINE  
(69) Vilen, B; Immunity 1999, V10, P239 HCAPLUS  
(70) Wang, X; Exp Hematol 1999, V27, P139 HCAPLUS  
(71) Yang, W; Exp Hematol 1998, V26, P1126 HCAPLUS  
(72) Yano, S; Nature 1998, V396, P584 HCAPLUS  
(73) Yi, T; Mol Cell Biol 1993, V13, P7577 HCAPLUS  
(74) Yin, T; J Biol Chem 1997, V272, P1032 HCAPLUS  
(75) You, M; Mol Cell Biol 1999, V19, P2416 HCAPLUS  
(76) Zamorano, J; J Immunol 1998, V161, P859 HCAPLUS

L20 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 1992:122226 HCAPLUS

DN 116:122226  
 ED Entered STN: 03 Apr 1992  
 TI Genetic and molecular analysis of cdr1/nim1 in *Schizosaccharomyces pombe*  
 AU Feilotter, H.; Nurse, P.; Young, P. G.  
 CS Dep. Biol., Queen's Univ., Kingston, ON, K7L 3N6, Can.  
 SO Genetics (1991), 127(2), 309-18  
 CODEN: GENTAE; ISSN: 0016-6731  
 DT Journal  
 LA English  
 CC 3-3 (Biochemical Genetics)  
 Section cross-reference(s): 6  
 AB The cdr1 gene in *S. pombe* was identified as a mutation affecting the nutritional responsiveness of the mitotic size control. cdr1 Alleles have been further analyzed for genetic interactions with elements of the mitotic control pathway and cloned by plasmid rescue of a conditional lethal cdr1-76 cdc25-22 double mutant. These analyses show that the cdr1 gene is allelic to nim1, a gene identified as a high copy number plasmid suppressor of the mitotic control gene, cdc25. The gene structure for cdr1 differs from the described nim1 gene in the carboxyl-terminal portion of the gene. The published nim1 sequence encoded a product of predicted Mr 45,000, and included 356 amino acids from the amino-terminal region of the gene and 14 amino acids from a noncontiguous carboxyl-terminal fragment. The cdr1 sequence includes an addnl. 237 amino acids of the contiguous fragment and encodes a product of predicted Mr 67,000. The sequence shows a high level of identity with protein kinases over the amino-terminal catalytic domain, and limited identity with yeast protein kinases SNF1, KIN2 and KIN1 over part of the carboxyl-terminal domain. The effect of overexpression of the full length gene has been examined in various genetic backgrounds. These data show that the full length gene product is required to give a normal cell cycle response to nitrogen starvation. A detailed examination of the genetic interaction of cdr1 mutants with various mutants of mitotic control genes (cdc2, cdc25, wee1, cdc13) demonstrated strong interactions with cdc25, some cdc2 alleles, and with cdc13-117. Overall, the results are interpretable within the framework of the existing model of cdr1/nim1 action in mitotic control, i.e., cdr1 functions upstream of wee1 to relieve mitotic inhibition.  
 ST Schizosaccharomyces mitosis gene cdr1 protein sequence  
 IT Schizosaccharomyces pombe  
     (gene cdr1 of, for relief of mitotic inhibition, nucleotide and encoded peptide sequences of)  
 IT Deoxyribonucleic acid sequences  
     (gene cdr1 protein-specifying, of Schizosaccharomyces pombe, complete)  
 IT Mitosis  
     (inhibition of Schizosaccharomyces pombe, gene cdr1 for relief of, sequence of)  
 IT Protein sequences  
     (of gene cdr1 protein, of Schizosaccharomyces pombe, complete)  
 IT Gene, microbial  
     RL: BIOL (Biological study)  
         (cdr1, for relief of mitotic inhibition in Schizosaccharomyces pombe, nucleotide and encoded peptide sequences of)  
 IT 139047-10-2  
     RL: PRP (Properties)  
         (amino acid sequence of)  
 IT 139045-94-6, Deoxyribonucleic acid (Schizosaccharomyces pombe clone pcdrl gene cdr1) 139045-95-7, Deoxyribonucleic acid (Schizosaccharomyces pombe clone pcdrl gene cdr1 plus 5'- and 3'-flanking region fragment)  
     RL: PRP (Properties); BIOL (Biological study)

(nucleotide sequence of)

=> => fil biosis

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CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT  
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 29 June 2005 (20050629/ED)

FILE RELOADED: 19 October 2003.

=> d all 130

L30 ANSWER 1 OF 1 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
AN 1992:88138 BIOSIS  
DN PREV199242040413; BR42:40413  
TI REGULATION OF THE CDC25 PROTEIN IN XENOPUS EGG EXTRACTS.  
AU KUMAGAI A [Reprint author]; DUNPHY W G  
CS DIV BIOLOGY, CALIF INST TECHNOLOGY, PASADENA, CALIF 91225, USA  
SO Journal of Cell Biology, (1991) Vol. 115, No. 3 PART 2, pp. 243A.  
Meeting Info.: ABSTRACTS OF PAPERS PRESENTED AT THE THIRTY-FIRST ANNUAL  
MEETING OF THE AMERICAN SOCIETY FOR CELL BIOLOGY, BOSTON, MASSACHUSETTS,  
USA, DECEMBER 8-12, 1991. J CELL BIOL.  
CODEN: JCLBA3. ISSN: 0021-9525.  
DT Conference; (Meeting)  
FS BR  
LA ENGLISH  
ED Entered STN: 4 Feb 1992  
Last Updated on STN: 5 Feb 1992  
CC General biology - Symposia, transactions and proceedings 00520  
Cytology - Animal 02506  
Genetics - Animal 03506  
Biochemistry studies - Nucleic acids, purines and pyrimidines 10062  
Biochemistry studies - Proteins, peptides and amino acids 10064  
Biophysics - Molecular properties and macromolecules 10506  
Enzymes - Physiological studies 10808  
IT Major Concepts  
    Biochemistry and Molecular Biophysics; Cell Biology; Enzymology  
    (Biochemistry and Molecular Biophysics); Genetics  
IT Miscellaneous Descriptors  
    ABSTRACT ATP PROTEIN KINASE POLYMERASE CHAIN REACTION DNA  
ORGN Classifier  
    Salientia 85306  
    Super Taxa  
        Amphibia; Vertebrata; Chordata; Animalia  
    Taxa Notes  
        Amphibians, Animals, Chordates, Nonhuman Vertebrates, Vertebrates  
RN 56-65-5Q (ATP)  
42530-29-0Q (ATP)  
94587-45-8Q (ATP)  
111839-44-2Q (ATP)  
9026-43-1Q (PROTEIN KINASE)  
80449-02-1Q (PROTEIN KINASE)  
134549-83-0Q (PROTEIN KINASE)  
372092-80-3Q (PROTEIN KINASE)

87805-51-4Q (ATP)

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	E GUO ZI/AU
L2	28 S E3,E8
L3	117 S E31,E32
	E DUNPHY W/AU
L4	67 S E4-E8
L5	1 S (US20040018603# OR US6593110 OR US20020086392#)/PN OR (US2003
	E CDC25
L6	1217 S E3
L7	1995 S CDC25?
L8	14 S L1-L5 AND L6,L7
L9	1 S L8 AND L5
L10	1 S L6,L7 AND 517
L11	3 S L6,L7 AND SQ(S)TQ
L12	5 S L6,L7 AND CARBOX?(S)TERMIN?(S)KINASE
L13	2 S L6,L7 AND CTK
L14	1 S L6,L7 AND AMINO(L)TERMIN?(L)FORKHEAD
L15	12 S L5,L6 AND 58
L16	2 S L5,L6 AND 58() (KD OR KDALTON OR KILODALTON OR KILO DALTON)
L17	1 S L5,L6 AND 58(L) (MW OR MOL MASS OR MOL WEIGHT)
L18	9 S L9-L14,L16,L17
L19	1 S L5,L6 AND 58 KDA
L20	10 S L18,L19
L21	0 S L5,L6 AND (58000 OR 58 000)
L22	13 S L8 NOT L20

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SET COST ON

FILE 'BIOSIS' ENTERED AT 13:17:07 ON 07 JUL 2005

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	E GUO Z/AU
L23	283 S E3,E11
	E GUO ZI/AU
L24	37 S E3,E6,E11,E12
L25	1 S E13
	E DUNPHY W/AU
L26	75 S E3-E6
	E CDC25
L27	1642 S CDC25?
L28	13 S L23-L26 AND L27
L29	13 S L28 AND PY<=2000
L30	1 S L29 AND CONFERENCE/DT
	SET COST OFF

FILE 'BIOSIS' ENTERED AT 13:19:21 ON 07 JUL 2005  
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FILE 'BIOSIS' ENTERED AT 13:20:11 ON 07 JUL 2005